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THE RISE OF MUSIC

"Motions flow
o one another, even as though
They were modulated so
To an unheard melody."

TENNYSON.

Photo, F. Hanfstaengl.

THE MUSIC LESSON.

FROM THE PAINTING IN THE NATIONAL GALLERY BY GABRIEL METSU
(NATIVE OF LEYDEN 1630-1667.)

Frontispiece.

THE RISE OF MUSIC

BEING A CAREFUL ENQUIRY INTO THE DEVELOPMENT OF THE ART FROM ITS PRIMITIVE PUTTINGS FORTH IN EGYPT AND ASSYRIA TO ITS TRIUMPHANT CONSUMMATION IN MODERN EFFECT.

PECIALLY BRINGING OUT THE INFLUENCE OF THE CHURCH UPON THE JOINT DEVELOPMENT OF HARMONY AND NOTATION—THE IMPORTANCE OF THAT GREAT CENTRAL DEVELOPMENT THE ENWEAVEMENT OF THE SCALES—THE CREATIVE CONSEQUENCES OF THE CLAVIER TYPE OF INSTRUMENT AND THE EXPLANATION OF A NEW AND PERFECT ORDER OF BEAUTY RESTING UPON OUR TEMPERED SYSTEM.

BY

JOSEPH GODDARD.

Author of "Musical Development," "A Study of Gounod's 'Redemption,'" "The Deeper Sources of the Beauty and Expression of Music," etc.

With Illustrations of Early Instruments, and Numerous Musical Examples drawn from Ancient and Modern Sources.

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CONTENTS.

PART I.

THE PRE-CHRISTIAN PERIOD.

INTRODUCTION xiii

CHAPTER I.

THE GATHERING THE ELEMENTS 3

Moving and stimulating sound a natural influence—The elements of musical effect first come upon in the natural pursuit of pleasurable sensation—When such effects are intentionally reproduced a point of departure towards musical art is arrived at, but when they are modified or added to for the sake of improvement musical art is in evidence—Certain fundamental intervals of our present system and the principle of the key-note, entered probably into very early effects of the art.

CHAPTER II.

ANCIENT EGYPTIAN MUSIC 11

Description of ancient Egyptian musical instruments—Groupings of instruments and singers—Ancient Egyptians had probably some kind of notation and knowledge of harmonic effect; but the more impressive effect of the art with them would have been in all probability vocal effect.

CHAPTER III.

ANCIENT JEWISH MUSIC 39

Hebrew music an outflow of that of the Egyptians and Assyrians—Besides the more festal or ceremonial form suggested by various references to music in the Bible, the Jews had a style which was adopted on the occasions of saying the prayers and "reading the law"—In these cases the words were intoned; hence syllabic monotone, cantillation and a form of plain-song—developing ultimately into a bardic intonation which became intensely expressive—Hebrew being a con-

senantal tongue *neumes*, or accents in the form of little strokes and points, came into use about the sixth century in order to designate the vowels, this use probably embracing an ancient tradition—Instrumental music and vocal represented probably different stages, and stood on different levels of development, the vocal being on the way to the main path and higher ground—The striking examples of respondent effect and repetition of sentence that occur in the Bible almost compel us to conclude that the higher music of the Jews was not confined to the bardic style but assumed occasionally independent forms.

CHAPTER IV.

ASSYRIAN AND BABYLONIAN MUSIC 64

Was of the same general character as Egyptian—The instruments mostly descended from the same source as Egyptian—The primal "Alleluia"—An Assyrian representation of a player holding a lyre tends to confirm the hypothesis that both Assyrian and Egyptian musicians were familiar with the effect of melody and accompaniment—The analysis of a living example of Oriental music sung by a section of Dervishes in Constantinople reveals points which connect it with the traditional chanting of the ancient Jews—This lends strength to the hypothesis that the type of this example was that of early melody—The fact that at the period of the Egyptian monuments and representations the nations of the Orient were highly civilised, suggests that with both the Egyptians and Assyrians music at the respective periods of the archæological evidences had long been a highly cultivated art.

CHAPTER V.

ANCIENT GREEK MUSIC 81

Mythical period—The primitive lyre—Instruments in general use—The Greek theory of the development of the diatonic scale—Origin of the Greek modes—The scale of Euclid—The final adjustment of the ratios of vibration of the diatonic tones and semitones—The modern feeling of the key-note defined clearly by Aristotle—The Greek enharmonic and chromatic modes—G. A. Macfarren's explanation of their adoption examined—Greek notation—Examples of ancient Greek music—The question of the possibility of a rhythm based on a $\frac{5}{4}$ measure—The uncertainty of interpretations by general rules, of ancient examples of rhythm—Remarks on the effect of music in Greek drama—The closing period of Greek music—Greatly increased development of flute and cithara playing—That the Greeks must have been familiar with the abstract effect of harmony is evident from Euclid's definition of the difference between a consonance and a dissonance—The corner turned towards the modern system—Analysis of our system of overlapping scales—The remarkable facilities it affords both for modulation and chromatic effect—The special need of time for development in the case of musical art—Within the Greek period the foundations of the modern art were definitely laid.

CHAPTER VI.

ROMAN MUSIC 135

The main benefit to the art contributed by the Romans was the keeping it in large evidence until time was ripe for the next vital departure—The local music of the early Romans (first come upon in connection with their religious ceremonies) was a wave of the Asiatic tradition which, having flowed to them through the Etruscans to the North, became subsequently influenced by the Greeks to the South—The Dionysian artists appear in Rome, B.C. 167—Greek Oriental pantomime accompanied by brilliant orchestras arrives in Rome from Egypt about B.C. 30—At the hands of Rome—in inflections new and old and voiced by instruments that have descended from Egypt, Asia and Greece—music, broadened in form yet strengthened in unity, passes into the Christian period.

Part II.

THE CHRISTIAN PERIOD.

CHAPTER VII.

The Continuity of the Art during the Early Centuries of the Christian Era 143

Music pursues its course in the Christian period without break of continuity—But at the beginning of that course, whilst it is resounding ordinarily at the surface of life, in underground chambers of the catacombs or hidden country places, an influence is developing destined to profoundly modify it, namely, the singing of the early Christian hymns—The question of their origin—Evidence tending to show that Greco-Latin music continued both within and without the Church as late as the ninth century—The so-called ecclesiastical modes simply portions of the fundamental scale—Their uses as separate bases of composition not prompted æsthetically but due to the restricted compass of the organ—That the Church music of this period was as plain and cold as these modes suggest is inconsistent both with the circumstances and the enthusiastic allusions to it which have come down to us.

CHAPTER VIII.

Early Traces of the Organ and the Viol: The Hexachordal System 156

The organ erected in Winchester Cathedral by order of Bishop Elphege (died 951) suggests that at this period music was following the course of development indicated by the scale of Euclid—The Hexachordal system also evidences that at this general period the principle of overlapping scales was operating—That it had unfolded no further than is suggested by the B-flat in the Winchester organ and hexachords of Guido and by the F-sharp in the scale of Hucbald, is doubtful—There is monumental evidence that by the eleventh century the viol family of instruments had come upon the scene—The unfolding of harmony and notation favoured by the organisation of the Christian church.

CHAPTER IX.

The Development of Modern Notation 174

The question of the origin of *neumes*—Our system of diagrammatic notation—Its evolution.

CHAPTER X.

The Emergence of Plain Song 196

Ligatures—The question of the beginning of measured music—The evidence duly considered suggests that the knowledge and practice of strict time have existed from an indefinitely remote period—We have no direct knowledge of the music sung in the Church for six or seven hundred years after its first introduction—By the end of the dark period a type of effect emerges composed of sustained sounds of generally even length—From this type of effect, largely in virtue of the

material and moral circumstances attending it, the more highly organised forms that have made music a serious, self-poised art, have arisen.

CHAPTER XI.

THE PLAIN CHANT THE SPIRITUALISED BASIS OF THE HIGHER FORMS 207

There is much in common between the plain chant and early Jewish music notwithstanding the differences both in form and expression which they involve—In both, the exhaustless pressure of the moral burthen so dominates the music that the rhythm follows the lingual phrasing—The smooth basis of sustained and generally even sounds continued as symmetrical constructions arose, still breathing the full assured spirit of the plain chant but kindling warmer—This is evidenced by the great Dutch masterpieces of the 14th and 15th centuries—The intensity of expression and high musical beauty attained in these works—The development of the tie and the unfolding of flats and sharps.

CHAPTER XII.

CONCLUDING REMARKS ON NOTATION: THE LESSON OF ITS DEVELOPMENT 217

Précis of the development of our system of notation—Its triumph is connected with its simplicity—This simplicity arrived at through a remarkable co-operation of sensorial and psychic action.

CHAPTER XIII.

ORGANUM: DESCANT: POLYPHONY 225

The definite origin of Organum unknown—Its prevalence for at least three centuries compels us to acknowledge that it must in some way have made a peculiar appeal to musical feeling—Faux Bourdon probably a development of Organum (as thirds and sixths became admitted)—The Plain Chant thus treated exemplified the outward form of subsequent Plain Harmony but its effect tended rather to destroy than increase the coherence between the different notes of the melody—This was as far towards harmony as in this path could be got—Harmony did not develop out of the principle of a succession of erections of super-posed notes but from a subtle and inexplicable principle of melodic enrichment unfolded in the *rencontres* of moving parts as discovered in Descant and Polyphony—Imitation seems inherent in the musical instinct—It influenced musical development organically—Whilst not interfering with freedom between the parts, it gave them a common purpose and equal importance—Hence arose that great style of choral writing in which contrast and every variety is united in one general expression.

CHAPTER XIV.-V.

HARMONY 244

The evolution of harmony—The chance unfolding of its salient intervals—Prepared harmonic effect—Definite chords applied to popular songs—The Volkslied, Choral and Madrigal—The contact of the Flemish and Italian schools—The spirit of Italy—The use of chords in different positions unfolded gradually—Progress in clear tonality depended upon the use of harmony in connection with melody and rhythm—Examples from Palestrina—The general harmonic advance reacts upon Polyphony—Imitation and the enweavement of parts involve

definite harmonic progressions—The different inversions and degrees of completeness of chords are æsthetically different things—The chord of the dominant seventh not the cause but a last and deciding factor of clear tonality—This chord, like so many other important developments unfolded gradually—It also probably helped in the reduction of the mediæval modes to the modern major and minor—Its special attribute is its inherent æsthetic power—The remarkable ascent in harmonic effect which characterises the post-Haydn epoch probably due to the inspiration of new melody—Two other combinations were destined to stand out in their capacity for unfolding under certain circumstances inordinate æsthetic power: the chord of the subdominant and that of the second inversion of the Common chord.

CHAPTER XVI.

MODULATION 281

A chord, beyond the effects which lie in its use when a single key is kept to, gives birth to new effect when appearing in another key before the influence of the old has passed away—Examples referred to showing that the principle of varying the expression in both melody and harmony by the incorporation of notes belonging to another key actuated the composers of the early Flemish period—In modulation a distinctly raised effect occurs not to be accounted for by either the melody or harmony in themselves—The general conditions which render this possible involved in our system of overlapping scales—The action of modulation not always distinct and positive—Up to the Haydn epoch modulation was largely concerned with symmetric construction whilst the heightening of expression due to it proceeded with a certain deliberation—But as the contact of effects between removed keys became more developed it led to tenser melody as well as to harmonic effect peculiarly brilliant and striking—Example from Weber.

CHAPTER XVII.

THE RISE OF ITALIAN MELODY: THE BEGINNING OF THE ARTISTIC SONG 291

Melody with accompaniment, as a vehicle of special feeling was not a development of the songs of troubadors or any traditional ditties, but unfolded from vocal part-music, generally polyphonic in form—This evolution occurred spontaneously in the various countries of Europe in which musical art was cultivated—The employment of recitative in Opera and Oratorio generally considered as due to the initiative of Peri and Caccini in their "Orpheus and Eurydice," and of Cavaliere in his "Rappresentasione del anima e corpo"—Too much importance has been attached to these cases—The general instinct of musicians seems at this period to have been pressing towards a more individualistic expression than that peculiar to the part songs or songs for a single voice then existent—In this as in most other cases of art-development the path by which new expression was reached was through extant form—This demonstrated by internal evidence of the new music itself—The arbitrary confining of vocal expression to broken, exclamatory effect did not find favour with succeeding composers—Melody acquired a beauty all the more intense as it expressed individual feeling—The unique traits of Italian melody now begin to stand out clearly.

CHAPTER XVIII.

THE FORESHADOWING OF MODERN ORATORIO 305

Harmony was influenced by the new inspiration which the dramatic spirit gave to melody—At this period, in oratorio, individual feeling enters the chorus as well as the solo—Striking example in Carissimi's "Jephtha"—A comparison of

the latter work and the "Four Passions" of Heinrich Schütz—The dramatic spirit in Carissimi's recitative—The recitative of Heinrich Schütz contains the germ of that style (conspicuous in Mendelssohn and Spohr) which combines the beauty and expression of song with the declamatory effect and movement of language—Suggestive differences in the choral writing of Schütz and Carissimi—The rich, involved part-writing peculiar to the German school is absent from "Jephtha," in which nevertheless we have the prototype of the double chorus and a suggestion of that punctuating flowing passages with massive harmonies of which Bach and Handel make such brilliant use—Both works unite in foreshadowing modern oratorio—In "Jephtha" is the prototype of the Italian "Aria."

CHAPTER XIX.

THE ART OF ACCOMPANIMENT 321

There can be scarcely any doubt that the instinct of accompaniment manifested itself in the ancient playing of lyre, harp and lute—Accompaniment in evidence in the *preludz* and *ritornelle* of the trouvères and trouhadors—Also in the prelude drawn from the vocal parts, with which the early Church composers ushered in the voices—The feeling for accompaniment in organ playing induced by the use of the *through* bass (figured)—Accompaniment to early vocal solo consisted largely of sustained chords—In Cavalli it is seen unfolding accessory articulation, sometimes between the vocal phrases, sometimes in conjunction with them—By the period of Alessandro Scarlatti two general kinds of accompaniment had unfolded, intermingling but clearly distinguishable, the leading motive of one being the support of the melody by chords (sustained or broken), that of the other its fuller expression through an accessory strain—Accessory articulation in accompaniment sometimes instead of intertwining with the leading theme is semi-independent, its function in the latter case being that of comment or interpretation—The intertwining form gives rise to an effect which enters into the highest developments both of vocal and instrumental music, in the mutual enhancement of themes—This we term *counter-melodic effect.*

CHAPTER XX.

THEMATIC TREATMENT 339

The problem of the composition of an instrumental movement (the combining variety and important dimensions with unity) was for a time effected by adherence to the fugal principle—By the time of Emmanuel Bach this method of procedure had passed into another, called *thematic treatment*, in which the *subject* is so conceived as to be fitted for far more varied treatment and to be suggestive *spiritually*—Thus whilst it embraces imitation, counter-theme, free counterpoint and counter-melodic effect all under conditions admitting of more enlarged scope for melodic, harmonic and rhythmic display than in vocal music, it operates by means of other and subtler liens between the subject and subsequent effect.

CHAPTER XXI.

THE INTRODUCTION INTO THE ORGAN OF THE INTERMEDIATE SEMITONES 347

Between the erection of the Winchester organ (about 951) and the completion of the Halberstadt organ (1361) the remaining intermediate semitones had become introduced, and represented upon the key-board.—Though the latter unique contrivance was by this time virtually achieved its use was but dawning—It has

been the custom to look down on the keyboard as an aid to theory but in the light of our system of enwoven scales out of the beginning of which it arose and whose development it aided, it is musical history and theory embodied

CHAPTER XXII.

THE CONNECTION BETWEEN THE DEVELOPMENT OF VOCAL MUSIC AT THE EARLY FLEMISH PERIOD AND THE PLAN OF THE CONTEMPORARY ORGAN 355

The mathematical relations of the typical diatonic scale—Our system of enwoven scales is inconsistent with each corresponding exactly with the typical scale—The pioneers in Polyphony were led into different scales by æsthetic feeling—The scales in which the early Flemish composers wrote and those suggested by the nomenclature of the chromatic keys of the Halberstadt organ correspond—Notwithstanding at this period all the intermediate semitones were present in the organ they were concerned with only a few scales—The scale-enweavement developed thus far did not involve a material departure from Just intonation.

CHAPTER XXIII.

THE CREATIVE CONSEQUENCES OF THE CLAVIER TYPE OF INSTRUMENTS 365

The development of an instrument of fixed sounds side by side with the progress the art had made at this period was a vital condition of its next great unfolding—There can be little doubt that the key-board from its earliest use in both organ and clavichord induced a style of composition peculiar to each of these instruments—The new path thus opened up led to the unexpected and creative—When all the scales had become enwoven and the system was fuller because it was one, the composer's grasp of it was peculiarly facilitated by means of the key-board—More particularly were his powers increased in the exploration of harmony—The key-board further induced the construction and permitted the playing of more finely complex forms of combinative writing than could be conceived for or executed by a choir—Among the larger consequences of this interior culture of the art was the remarkable development of thematic treatment by Beethoven, and that more striking effect of modulation which is produced by the close use of widely removed keys.

CHAPTER XXIV.

THE PROBLEM OF THE USE OF OUR SYSTEM IN CONNECTION WITH JUST INTONATION: THE PSYCHIC FACTOR 369

The early Flemish composers did not observe the difference between the large and small tones of the typical scale but made directly for more highly organised form—A system of scales dominated by the principle of strict mathematical uniformity is impossible as a basis of modern music—There is nothing unsound in the *principle* of that irregularity which obtains in the intonation of the constituent scales of our system—The undoubted fact of a new musical creation of perfect beauty resting upon a system, of which retrogression in the constituent scales is a vital condition, as well as the distinctly successful use of intervals in our system which are certainly a compromise, explained by the consideration of the action of the *psychic factor* in our sensibility.

CHAPTER XXV.

CONCLUDING REMARKS 379

The development which forms the main distinction between modern and all ancient musical art is our system of enwoven scales—It seems far from improbable that the determining factor in this great central development was the rise of the Christian Church—Peculiar parallelism between music and architecture in fewness of leading forms—This probably explained by the forms of neither being drawn directly from Nature—That in each case the suggestings of Nature that do occur touch upon something generic or familiar in feeling, tends to explain their power —In music these suggestings are those gracious lineaments of strains that have come down upon the stream of song and proved the "touch of nature" "in all time"—Such suggestings will probably go on—breathing the feeling of their source—Thus music will not shake off its past—from which proceeds the "spirit feeling," and the note of which is concerned with inspiration—Music and architecture are also largely similarly situated in that the religious enthusiasm that aided so largely to create them seems destined to become less concentrated and intense—This reflection affects music more deeply than architecture because the latter is related to man's serious life in other ways than in connection with religion, whilst the necessity of music as a means of expressing the profound emotions of man in relation to the religious aspect of existence has been always its definite sanction as a high and serious art.

ERRATA 398

INTRODUCTION.

MUSIC is generally regarded as a modern art. Whilst Architecture and Sculpture in impressive phases take back the mind to ancient Greece and Rome, and Painting to the period of Rafaelle and Michael Angelo, the masterpieces of Music resting upon the fully constituted art, belong to the era this side of John Sebastian Bach. Further, in the cases of architecture, sculpture and painting, there are ancient examples which speak to us much, though probably not altogether, as they spoke to their first regarders. In the case of poetry also, the voice of some of the oldest (notably that of the Bible, which even thrills through the deadening effect of a foreign tongue) may be said to be as fresh and clear to us as it was to the generations in which it arose. But hearkening back in the case of music we soon cease to hear its living

sound, whilst from its primitive effects comes no echo, save through imagination—they are gone as completely as their contemporary bird-notes. Yet distinct evidences of music appear as far in the past as any light extends. Not only so but they impress distinctly that there is a continuity in musical art from the very dawn of knowledge to the modern period. As H. Lavoix* says, "we must not deceive ourselves, there is no gap in musical history, there are only ignorances. If the links of the chain appear broken it is because historians have not discovered how to connect them."

In the following chapters I shall endeavour to show that this comparatively late maturing of the art has been a result flowing naturally out of the conditions—that certain vital departures in the development of music's form rising out of special combinations of circumstances, demanded an indefinitely long course of experiment and play of chance in order to come about; whilst the continuity above referred to—a continuity through time and change prevading in its course widely different peoples, climes and eras, has been

* "Histoire de la musique."

essential to the formation of that spiritual foundation from which music derives its manifold accent—its infinite notes of feeling.

I may here refer to the following points as specially brought out in this work.

The influence of the Church upon the joint development of Harmony and Notation.

The importance of that great central development—the enweavement of the scales.

The creative consequences of the Clavier type of instrument.

And the explanation of a new and perfect order of beauty resting upon our tempered system.

It will be seen then that the present work is not a history of music in the ordinary sense, but rather a tracing of the organic unfolding of the musical art. At the same time it presents a perspective of both the history and constitution of music, in which history is seen to elucidate theory, and theory, history.

PART I.

THE PRE-CHRISTIAN PERIOD.

CHAPTER I.

The Gathering the Elements.

SOME power to produce sound and some sensitiveness to sound are qualities pervading the greater portion if not the whole of animate nature. The ear of the cray-fish, though a far more restricted organ than the ear of man, is planned on the same principle, whilst the various means by which inferior animals produce sound resemble as to the principle of procedure those by which man produces it, that is to say: all sound of animate origin is produced by the breath, or by the action of one portion of the body upon another or upon a separate object. The bird sings; the mole-cricket produces a long, sustained, even note of a definite pitch by the action of a delicate apparatus

connected with its wings; the ape, as well as producing vocal sound, beats hollow tree-trunks; man sings, claps his hands to music, and plays instruments.

In the case of the inferior animals the production of sound seems largely to subserve the almost opposite purposes of calling or charming the female, and of inspiring fear in an enemy.* At the same time it may also be a nervous outlet or expression, and thus act as a stimulus upon the nature generally. If this last is the case then it would seem that for sound to have a specially moving and generally stimulating influence it is not essential that it should be conformed artistically.

The purely natural state of things in connection with musical sound which is here suggested, is a necessary antecedent to musical art,—which had no definite beginning but which joins the great ocean of animate sound. Whether its earliest forms were rudiments of song, or effects produced by some primitive instrument, or both combined, the impulse which led to their pro-

* The question of the relation of this universal sensitiveness to sound of its two main associations, terror and joy, to the musical emotion in man, I have touched upon in a work entitled, "The Deeper Sources of Beauty and Expression in Music."

duction would have first arisen in the far back course of natural, as opposed to art, activity—as instanced by the unpremeditated play of the human voice, or of the hands, as in clapping or striking some sounding object, or of the feet, as in dancing.

Yet though the facts are continuous we can conceive that a point of departure in the direction of art was arrived at when a particular effect of voice or instrument was reproduced *because it gave pleasure in itself.* And when such an effect was varied, modified, or added to, in the same spirit, that is, for the sake of the pleasure it gave, then we can further conceive that musical art was in evidence. Such a primitive state of things even as this would not come about easily. It involves the co-operation of two antagonistic principles—fixation and change. An effect produced by such a sounding object as a horn or hollow tree-trunk would be fixed and preserved by the object itself, but this advantage would entail the drawback of little or no power of development. Even when man advanced to the construction of such an instrument as a primitive harp or flute it would be devised for the production of particular effects to which it would be almost, or entirely, confined. On the other hand, a particular

succession of vocal tones would at such a primitive period depend for preservation upon the uncertain action of tradition, but the conditions involved in their production so far from tending to bar further development would, as we know, admit of it to an infinite extent.

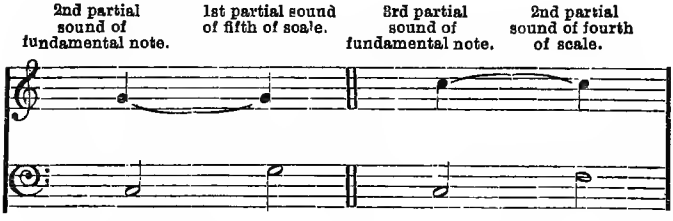
It is in harmony with certain facts (such as monkeys producing vocal sounds whilst striking hollow tree-trunks, as described by Dr. Livingstone; and negroes chanting to the sound of a drum or horn amid universal clapping of hands, as described by H. M. Stanley; and ancient Egyptian representations of singers being accompanied by the clapping of hands as well as by the playing of instruments) which are suggestive in this connection, to assume that a very early, if not the earliest, use of a musical instrument was to accompany the voice. In this way might have been ultimately brought about the commencement of that harmonious co-operation of the principles of fixation and change upon which the whole progress of music has hung. The freedom of the voice would tend to the introduction of novelty; the fixed sounds of the instrument would tend in themselves as well as by their association with particular vocal phrases, to

preserve past effects. The primitive Greek lyre of four strings points to such a stage of development as this.

The opinion has been put forward that the earliest manifestations of the musical instinct were purely rhythmical actions, upon the assumption that the pleasure the ear takes in rhythmical effect is a more primitive feeling than its gratification by tune. But the spontaneous play of the vocal organs is quite as rudimentary, natural and easy as that of the limbs. The two tendencies—to be pleased by rhythm and by pitch effect, appear to be organically connected. It is therefore safer to assume they were together in the beginning.

We may assume that if the intervals involved in a considerable number of early pitch effects had been compared it would have been found—as in the case of all primitive musical effects that have been examined—that certain intervals would be repeated in many examples. There are some grounds for the further assumption that these, so to speak, stock-intervals would include some of the fundamental intervals of our present system. Professor Helmholtz suggests that the division of the octave C—F G—C, found almost without exception everywhere, would

result naturally from the following two facts; (1) that the first partial sound of the fifth of the scale is identical with the second partial sound of the fundamental note; (2) that the second partial sound of the fourth of the scale, is identical with the third partial sound of the fundamental note.



The rationale of this suggestion is, that as in the impression of the initiatory note one at least of the elements of sensation due to the following note is already present, a less extensive change in sensation is involved in passing to this latter note than would be the case, in most instances, in passing to another note; or in other words, the course taken is the path of least resistance.

Assuming then that primitive music embraced at least these fundamental intervals of our system, they would doubtless have been mingled with others adopted arbitrarily either from choice or necessity.

But the former through being more familiar to sensation or more easily and frequently hit upon, would have been at the period in question, as they are now, land-marks of form—points of departure and return—elementary conditions of clearness.

The principle of a key-note must have betrayed itself at an early period of musical development for it is involved whenever a certain note occupies a central or fundamental position in a design; it exists even when the design is composed of but two or three notes —in fact it must exist for there to be design at all. It operates in language in the use of inflections—as when in a sentence several of these bear a certain relation to the last, whether this terminates upon a high, low, or central note.

We are led then by the foregoing considerations to the following general conclusions concerning that prehistoric course of musical activity which emerges the definitive art-stream.

(1). That the specially moving and generally stimulating influence of sound was in operation long before sound was conformed artistically.

(2). That the elements of distinct musical activity

were first unfolded in purely natural activity; that is to say, certain effects having a crude musical character were first produced in the natural pursuit of pleasurable sensations.

(3). That a point of departure in the direction of musical art was arrived at when a particular effect of the kind just referred to, was intentionally repeated or reproduced; and that when such an effect in repetition was modified or added to for the purpose of improving it, musical art was in evidence.

(4). That at this early stage the two opposing principles—fixation and change—upon whose harmonious development the whole progress of music has depended, were in operation.

(5). That some of the fundamental intervals of our present system probably entered into the early effects of the art; whilst the principle of the key-note, being the basis of design in pitch-effect, must have done so.

CHAPTER II.

Ancient Egyptian Music.

THE most important archæological evidences of musical art have been found in Egypt, where they are not only more abundant but in part more advanced in character than elsewhere. They are mainly in the form of monumental carvings, and wall-paintings, representing groups of players with their instruments, whilst a few consist of the remains of ancient instruments themselves. They embrace lyres of seventeen, and harps of fourteen, strings (both being coeval with about the middle of the period of the Jewish captivity) and flutes, giving a diatonic scale, of the period of Usertsen II.*

* B.C. 2366 (British Museum). B.C. 1550 (Sharp).

Civilization in its march from central Asia found in Egypt conditions which enabled it to take a deeper root, and put forth a fuller flower, than at the other favoured points which invited settlement. On the banks of the Tigris and Euphrates it was more exposed to succeeding waves of migration than on the banks of the Nile, where with the sea to the North and the desert to the West it was exposed to the chance of disturbance only on the South or by the Isthmus of Suez. Besides this security the unique advantage which Egypt enjoyed in possessing a soil which yielded the maximum of increase for the minimum of rude labour, was highly favourable to her attaining an advanced civilization in that it freed a large proportion of the population from purely physical labour, whilst the circumstances were such as to demand largely the exercise of the mental faculties—as in the management of the overflow, the calculation of time, and the measurement of the land. Hence the special progress of the Egyptians in engineering, astronomy and geometry. And, that material affluence and the pursuit of the exact sciences should be accompanied by the cultivation of the liberal arts, is only in the natural order of things.

The long contact between Egypt and outlying

countries, which came about in the course of migratory movements, trade and even war, tended to a common admixture of musical as of other knowledge. The archæological and historical evidence which has become unfolded concerning ancient Jewish and Assyrian musical instruments, betrays that these were mainly of the same types as ancient Egyptian. Thus it appears probable that the music of Egypt and of the more civilized of neighbouring nations was of one general character. The circumstances to which I have referred which led to Egypt's attaining the highest pitch of refinement among these nations, enabled her to continue to maintain a leading position in this respect throughout the whole historic period of the old world and until well within the intellectual day of Greece. The music of a particular people depends no doubt upon the idiosyncrasy of that people as well as upon its circumstances, and perhaps in the case of each of these nations special style was more or less developed. But bearing in mind the superior character of the evidences of the art found in Egypt, it seems not unlikely that her relation to them as regarded music harmonised with that she bore to them with regard to progress generally. It is therefore probable that Egyptian, Babylonian,

Assyrian and Jewish music involved systems having common features; if not one general system; and that of these various schools the Egyptian, at least for a considerable time, took the lead.

The principal instruments of the ancient Egyptians were the

Harp	Trumpet	(The Harp
Lyre	Sistrum	and Lyre
Pipe Single	Drum	assume
and Double	Tamboureen	various
Flute	Cymbals	forms).
Lute	Crotola	

The Harp.

The harp varied greatly as to size, shape, and the number of strings. The largest—like those represented in the frescoes discovered by the traveller, Bruce—were higher than a man, and in form distinctly typical of the modern instrument. These stood upon the ground, for which position their bases were squared. Of the medium sized, some stood upon the ground; others were attached to a kind of support proceeding diagonally from the ground in such a way as to be inclined towards the player, who, in both these circum-

stances, knelt on one knee. Of the small, some were placed upon a table before which the player stood, others were played balanced upon the shoulder in nearly a horizontal position. These were light instruments with but a few strings.

The number of strings varied from four to twenty-two but they did not always increase in the ratio of the height of the instrument; some of the deep G-shaped instruments had as many as the highest. The strings (as in all Egyptian stringed-instruments) were of catgut and at the top were wound round pegs passing through the frame. By turning these pegs the instrument was tuned as in modern stringed instruments. A noticeable point in the construction of all Egyptian harps is the absence of a post which in the modern instrument strengthens and completes the frame. This probably was not felt as a disadvantage owing to the generally limited number of strings and to the character of the construction and material of the frame. Something would depend upon the pitch demanded of the longer strings. Egyptian harps were frequently of graceful design, finished construction, and tastefully painted with lotus and other flowers. Those the representation of which Bruce discovered, have each at

the pediment carved figure heads—probably of the kings of whose state these instruments formed a part, the walls on which they are painted belonging to the

FIG. 1. FROM TOMBS OF THE KINGS. EPOCH OF RAMESES III. ABOUT 1250 B.C. THEBES.

tombs of the kings of Egypt. The harpers are officiating before Ao, one of the Egyptian deities.

These are far from the oldest harps represented in

Egyptian sculptures. The oldest are ruder in form and date probably nearly a thousand years earlier. There are no instances of a double set of strings, or of pedals, in Egyptian harps. In some of the representations, however, there are more pegs than strings—sometimes one, two and three more; sometimes double the number. It has been suggested that this may point to some provision for adding semitones. The feature of the frame enlarging towards the base so as to become a copious resonator is as marked in the larger Egyptian harps as in our modern instruments. In the larger and some of the smaller the form of the frame-shaft though tapering upwards on every side, is undifferentiated—the lines unbroken, as in the modern instrument; but in others the lower part is distinctly differentiated from the upper. In two instances the basal portion is decorated in such a way as to resemble tortoise-shell, suggesting the idea that (as in the instance of the Greek lyre) an early form of the frame may have been the shell of a tortoise, a curved process being attached to complete it. However this may have been, this peculiar differentiation and apparent separateness of construction in the frame seems to belong to a very early stage in the development of this instrument.

H. M. Stanley in "Darkest Africa" referring to various evidences of a connection between the modern natives of Africa and the ancient Egyptians, includes among

FIG. 2. ANCIENT EGYPTIAN INSTRUMENT FROM WILKINSON'S "ANCIENT EGYPTIANS."

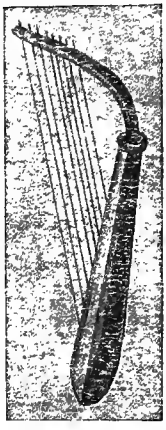


FIG. 3. MODERN AFRICAN INSTRUMENT FROM H. M. STANLEY'S "DARKEST AFRICA."

these evidences a certain resemblance between the musical instruments of the two peoples.

The above illustrations will convey this resemblance far better than any description could approach.

What is so striking and suggestive in this comparison is, as the reader will observe, the harp-like native African instrument has the peculiar differentia-

tion of the frame to which I have referred. This resemblance seems to suggest that either the African instrument is a descendant of the ancient Egyptian or a survival of its prototype. The principle of this kind of construction may be observed in some remains of ancient Egyptian musical instruments in the British Museum. In these the frame is of wood, the broad part rounded and hollowed out, boat-like, the narrow part curving from it being simply a rounded solid limb. In one the broad part is covered in with a parchment-like material.

THE LYRE.

The Egyptian lyre, though constructed on the same general plan as the Greek, was a heavier and apparently more powerful instrument but not so symmetrical. There are actual specimens (without strings) in the museums of Berlin and Leyden. The total height of the Berlin lyre is about two feet. The Leyden lyre is somewhat smaller. It appears to have been customary with the Egyptians to make one upright of the lyre higher than the other and thus the bar to which the strings were attached at top, diagonal, as in the following illustration (which the reader will observe is

without strings) the object being probably to enable

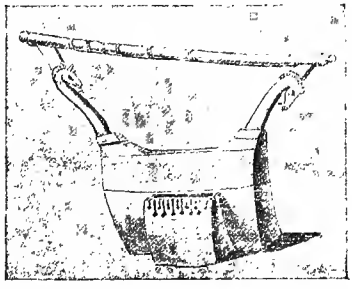


FIG. 4. BERLIN MUSEUM.

the instrument to be tuned by sliding the strings upwards or downwards along the bar.

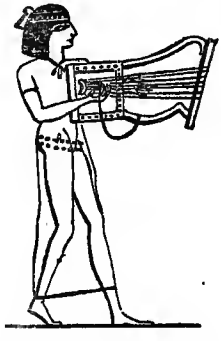


FIG. 5. THEBES.

The Egyptians twanged the strings both with the plectrum and with the fingers, and sometimes, as in the above illustration, they touched the strings

with the left hand whilst striking them with the plectrum held in the right. It seems far from improbable that some special effect was got in this way.

THE PIPE.

The pipe was a straight tube not exceeding a foot and a half in length and having three or four holes. It was held by both hands; a small piece of reed or thick straw was inserted in the hollow at the mouth, and so compressed as to leave only a narrow opening for the breath. Its limited diameter, general simplicity, and the fact that many were made of reeds, suggest its pastoral origin. After reed it was made of box, lotus-thorn and other sonorous woods, or of horn, bone, ivory and metal.

The double pipe was simply a pair of pipes. They were so held as to diverge as they passed from the mouth, and each was played with the corresponding hand. In Egyptian illustrations both pipes appear to be about the same length. A different general pitch, however, might have been produced by the short reeds or straws inserted at the mouths being of different lengths. With the Greeks and Romans the pipes were frequently of very different lengths. Whatever variety

in effect was obtained by this double instrument there can be little doubt that some effects of sounds in combination must have arisen in the course of its use.

The flute was a larger and more musical pipe. In one of the Theban pictures it is represented so long as to reach from the player's mouth to beyond (by about a fourth of itself) the length of his arm. Its general pitch was thus deeper than that of the pipe. As in the case of the pipe it appears to have been customary to blow into the flute through a straw reed, this having been found in tombs along with both instruments. But judging by the way in which the instruments are held in some of the representations they appear to have been also played by blowing over the top. In drawing conclusions, however, from these representations we must always bear in mind that they were monumental and thus probably only intended to be broadly suggestive—not literally faithful. From the word Sebi (which means thigh-bone) in hieroglyphics accompanying the flute, it is supposed to have been made (as well as of reed, bamboo, and other substances) of the leg-bones of animals as was done subsequently in Boetia, and is the practice in some countries in the present day.

THE LUTE.

The lute or guitar (called Tambourah by the French) is from the point of view of musical development the most interesting of Egyptian instruments, as it embodies the fundamental structural principle of all those instruments in which the conditions necessary for the production of a certain repertory of pitch-relations or intervals, instead of being already prepared and stereotyped, are brought about by the volition of the player. I shall show in a future page that the existence of such an instrument is calculated to be of great importance when the repertory of pitch-relations is (through the limited scope and quantity of musical ideas) rudimentary or incomplete, in that its extension upon this kind of instrument depends only upon the mind and action of the player, and does not demand as a first necessity a new step in invention and manufacture, as in instruments of fixed sounds and which also are confined to a particular repertory. The Egyptian lute was a light, graceful instrument of the guitar type, having usually three strings. The frame consisted of a long, flat neck and hollow, oval body, sometimes covered with leather, the upper surface being perforated in several places. The strings at the lower

end were fastened to a triangular piece of wood or ivory, and at the upper, were secured by being passed through holes in the neck, wound round the latter and tied. In one of the representations to which we have referred, of which Fig. 6 is a copy, the loose ends of the strings are visible. In none is there

FIG. 6. THEBES.

any sign of the use of pegs, notwithstanding they were, as we have seen, well-known to the Egyptians. The instrument was held slopingly across the chest, the player stopping the strings with the left hand whilst with the right he or she twanged them with a plectrum (which was usually suspended from the instrument) or with the fingers.

These four instruments—the harp, lyre, flute and lute (or guitar) are all that have any interest from a purely musical point of view. The trumpet* was used principally as a military instrument. It was straight, about a foot and a half long, and made apparently of brass. Egypt, like most ancient nations, was well supplied with instruments of percussion. These consisted of cymbals—formed like those of the present day but only about half a foot in diameter, and made of brass or a compound of brass and silver—of cylindrical maces (a kind of metallic staff surmounted by a head) which were struck one upon another; of the tamboureen and the drum.

The tamboureen had three forms, circular, square (or oblong) and two-squared—the squares separated by a bar. In Egyptian representations no rings appear in the frame but as in some the instrument is held up apparently after having been struck, we are led to imagine that it was furnished with metal rings.

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* It is funnel-shaped—something like a modern toy trumpet. An instrument of a peculiar and quite different shape that seems being blown like a trumpet appears, however, once in the representations.

Drums were some long—like the tom-tom of India—and some cask-shaped. The former were beaten with the hand at one end, the latter with sticks at each end.

An important instrument with the Egyptians, not for musical purposes but for its use in religious ritual, was the Sistrum—a metal loop mounted on a handle, the loop threaded loosely crosswise by three or four metal bars bearing brass rings. As is obvious from its construction it was shaken in order to produce a jingling sound. It was sometimes of highly finished design and construction, and decorated in a way emblematic of its sacred use.

Crotola (called also castanets) were shell-shaped pieces of wood more powerful than castanets, and used like modern clappers for frightening birds.

There are evidences of other instruments involving the principle of the harp yet differing from it in shape or in the way in which the strings are fastened and tightened, or in both. In some of these instead of pegs being used the strings are wound round a rod, and tightened by this rod being turned; in others they are wound round the fixed frame. Others have pegs but in form resemble a lute of which the frame is bowed, as in Fig. 7.

Actual remains of this last instrument may be seen in the British Museum. Looked at superficially it appears intermediate between the lute and the harp. But it would seem to be an impossibility that an instrument such as the above could have come about by modification of the lute, as of course if the frame of the latter is in the slightest degree concave the strings leave the fingerboard and the instrument embodies the principle of the harp or lyre.

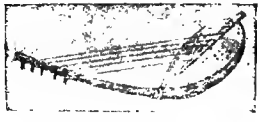
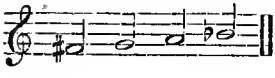


FIG. 7. BERLIN MUSEUM.

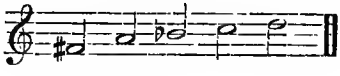
The question now arises:— What light does our knowledge of these instruments throw upon the kind of music they helped to produce? From the facts that Pythagoras (B.C. 571-497) was the sole teacher among the Greeks of the theory of sound as now accepted, and that in his youth he spent some years in Egypt, it has been concluded that it was there where he acquired his knowledge of this subject. He has, however, been credited with that improvement of the Greek

system which led to its embracing a diatonic scale of two octaves, and hence it has been further concluded (it having been assumed that this was also a result of his visit to Egypt) that the ancient Egyptians were acquainted with the diatonic scale. That they were cognizant of the effect of sounds proceeding diatonically has been recently placed beyond reasonable doubt. Mr. Flinders Petrie whilst excavating in a rock cut sepulchre at Kahun—a town which was built for the accommodation of the workmen employed on the Pyramid of Usertesen II.,—discovered a pair of flutes constructed out of reeds, each 18 inches long and $\frac{3}{16}$ of an inch in diameter, one having three, the other four, holes.* These flutes when discovered were too frail to bear playing upon, but Mr. Southgate (who read a paper upon them before the "Musical Association" at the Royal Academy), elicited by lip-blowing across their mouths the following series of notes—

THREE-HOLED FLUTE.

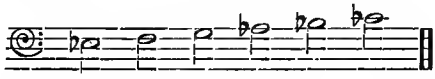


FOUR-HOLED FLUTE.



* These flutes are fully described in the Proceedings of the Musical Association, 1890-1891.

From the fact that both the original flutes and fac-similes spoke but faintly when blown in as described, Mr. Southgate concludes that the originals were played with a straw reed. Upon testing the fac-similes in this way he produced between the two flutes the following scale:—



and then by varying the pressure of the wind, reproduced it respectively a fifth and an octave higher; whilst Mr. Finn by similar means obtained from the three-holed flute the complete diatonic scale of C. All this latter evidence, it is true, is constructive evidence and assumes the absence of irrelevant effects which might have crept in through slight departures in the duplicates, through special action of the particular voice-reed used, or through the art of the modern player. Yet under all the circumstances it remains extremely plausible. In the first place very great care was taken to make the fac-similes faithful, and with the selection of the straw reeds; in the second place, there is no doubt about the fact that the Egyptians were in the habit of using voice-reeds, and there can be

but little, that they were expert in all the devices of the player upon these simple instruments. It is, therefore, very far from improbable that with these flutes a skilled Egyptian player would in the course of his or her playing produce all the various notes which have been specified as having been elicited from the fac-similes, with perhaps many more. At the same time this constructive evidence only suggests the same general fact which the positive evidence of the original instruments (which bear signs of careful construction) places beyond any doubt at all, namely, that the Egyptians were cognizant of diatonic effect, that is to say, the effect of a series of sounds of different pitch so related as for a semitone to succeed or precede one, two or three tones. For the most that can be concluded from all the evidence as absolutely certain, is, that the latter kind of effect entered into Egyptian music. From the constructive portion of this evidence it has been too hastily, or rather thoughtlessly, assumed that the scale of ancient Egypt was the same as our own. Even admitting that our major and minor scales could be produced on an Egyptian flute it does not follow that the system of the Egyptians was the same as ours, though it suggests

the strong probability that many intervals were common to both systems.

An important accessory to musical effect with the Egyptians was clapping of the hands. The representations on the walls of the tombs of their kings show that this accompanied every kind of musical performance, and suggest that it was a regular art. It was used in connection with the solo voice, the flute, harp, lute, the chorus and dancing; and sometimes it accompanied dancing alone. In one of the representations four men are clapping their hands to a single dancer. The fact that all four have their hands in the same position would prove—what was most probably the case—that they acted in strict concert if we had not to remember that in many of these delineations the feeling for naturalness is very imperfect. In one a herd of goats appears to be marching in step.

In connection with this practice of clapping, Wilkinson refers to the passage in Psalm 47-1, "O clap your hands together all ye people; O sing unto God with the voice of melody," as suggesting a similar custom among the Jews. In the light of this idea the coupling of the two injunctions appears all the more natural and

appropriate, as, thus interpreted, they refer to the dedication to religion of deliberate art-action.

The following are a few of the combinations of instruments and means of effect to be found in the representations to which I have referred: —

Harp of ten strings and double pipe. Harp of eight strings, lute and double pipe. Harp of seven strings and smaller one of four. Harp of eight strings, two lutes, double pipe and musician clapping. Two harps of nine and ten strings respectively, flute, and two men singing. Harp, lute, double pipe, lyre and square tamboureen. Two lutes, harp of twelve strings and woman clapping. A harper, two men behind and a row of five behind them; all but the harper have their hands raised as if in clapping. Wilkinson interprets the last combination as "a harper and blind choristers," but H. Lavoix refers to it as "a small harp of seven strings, five musicians clapping their hands, two singers."

These various groupings throw little light upon the style of Egyptian music but they are not altogether unsuggestive. They reveal that the Egyptians possessed at least a rudimentary sense of two elements

of modern music:—the combination of effects of different kind, and (as has been already pointed out) accentuation. They also tend to provoke curiosity as to whether in such combinations as flute and harp, flute and voice, large and small harp, the associated instruments enunciated the same melody or gave forth a melody and an accompaniment or a variation. I shall speak more explicately on this point after treating of Assyrian music.

I now come to the interesting question:—had these players any knowledge of harmonic effect?

With the consonance of an "octave" they must have been familiar as it would have been heard whenever women and men sang a melody together. That they were ignorant of the consonance of a "fifth" is improbable; of that of a "third" or "sixth," impossible.

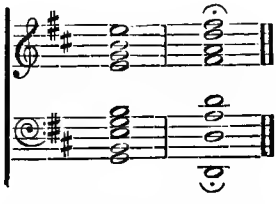
Lute players by sounding simultaneously two differently stopped strings; or harpists, two strings; or assemblages of singers, in the vicissitudes of practice; must even by the law of chance, have sometimes experienced all the above effects. And that (as in the case of the infant Mozart) the thirds and sixths arrested attention by their peculiar sweetness, there can be hardly any doubt. For that that feature of our sensibility in

virtue of which we realise these latter effects as elements of musical beauty, should have been absent in the Egyptian race is a great assumption.

But to feel the elementary beauty of fragmentary effects, and to be able to develop it in musical practice, are things which may be a long way apart. In the first place with a limited repertory of sounds—that is to say a series of sounds embodying a digest of the intervals in use—the simple knowledge of the above various consonances could only be attended by a proportionately limited development of harmonic effect. In the second place, this limited development would only be unfolded gradually. Harmonic effect, like melodic, is at any stage the work of many minds. Suppose, for instance, at a particular stage two octaves of our diatonic scale enclosed the repertory and the knowledge of all the consonant intervals then existent, it would by no means follow that there would have been unfolded even such harmonic effects as to the modern musical tyro are quite rudimentary. Even rudimentary effects are portion of "the long results of time," and particularly of those more quickening periods which come about when musicians in one country know what is doing in other countries. On the principle then that harmonic develop-

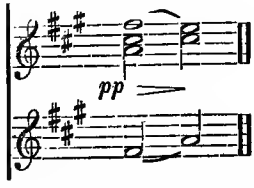
ment (bound up with melodic) is part of the progress of ideas, the scope of such development within the limits of our diatonic scale must be considered as still unexhausted. The following uses of chords within this limit, from Gounod, were when the passage was written —some thirty years ago—if not special to that composer, far from frequent.

Again, though the following progression may not in itself be new, its use as a cadence has broadened greatly in modern effect.



So with the relation of the minor chord on the sixth degree to the major chord on the tonic. Whilst the progression of the major chord to the minor, may be

said to be not only old but hackneyed, that from the minor to the major as used by Wagner in "Lohengrin," sounds almost like a new effect.



Then, whereas melody can be improvised, harmony as enunciated by different voices or instruments cannot, but requires experiment and deliberation, which to be carried out easily and to any considerable extent demand some system of notation. The question whether the Egyptians had a notation cannot be answered positively. Seeing they were highly advanced in astronomy and geometry it seems improbable that they should not have made some attempt to represent musical effect by written signs. But considering that the Greeks with all their ingenuity and having access to Egyptian art and learning, do not appear to have succeeded in consummating a simple and efficient system of notation, it may be presumed that if the Egyptians did possess a system it was, like that of the Greeks, as we know it, unwieldy and consequently of very limited use.

We are thus on this point of harmony led to conclude (first), having regard to the evidence of the varied instruments and their combined employment, that the Egyptians were probably in the habit of utilising that knowledge of elementary harmonic effect which it is difficult to conceive they did not possess; and (secondly), having regard to the comparatively primitive condition of their general system and the absence of a notation combining simplicity and efficiency, that their use of harmony, if it existed, was of a rudimentary character. On this point also I shall speak further after treating of Assyrian music.

In endeavouring to form an idea of a past condition of musical art in the absence of intelligible written effect much importance is necessarily attached to instruments. But it should be borne in mind that whatever may be their testimony—even supposing they revealed definitely the kind of effect that was drawn from them —this effect would, in the case of a stage of the art when though diligently cultivated it was still young, only be partially and imperfectly representative of the music of the period in question. It would represent not only one side but the lesser side. Even up to about the middle of the 18th century the main develop-

ment and general expression of the art was represented by vocal music. Now suppose this music was quite hidden from the modern historian—as vocal music is in the case of Egyptian music. Then that historian, from mid-18th century instrumental music alone, would probably form a very imperfect idea of the development of the art at even that comparatively recent period. Yet at that time the leading modern instruments were in use, and their essential features developed. But, as the reader knows, whilst the musical instruments of the ancient Egyptians—the leading ones, that is, the harp, flute and lute—far from possessed the powers and resources of their modern antitypes; and the more important modern instruments—the viol family—were absent; the human voice was then, as always, as perfect as it is now. Thus with this people it may well have been, that the more weighty, dignified and expressive effects of the art were vocal effects which have left no trace behind. This idea some remarks I shall make on the vocal effect of ancient Hebrew music, will tend to further emphasize.

CHAPTER III.

Ancient Jewish Music.

SUCH literally solid evidence, mute as it is and incomplete as it may be, as has assisted us in the case of the Egyptians, fails us in that of the Hebrews who in harmony with a mandate of their religion, have left few graven images or likenesses of any kind. It may be remarked in passing that the divorce thus occasioned in our minds, between the Jews and art dealing in outward form, tends to connect this people all the more closely with the more ethereal arts of poetry and music, of which the one has come down to us at their hands in such living, evident power, whilst the other in their literature is the subject of such frequent allusion and of such unmistakeable homage and enthusiasm.

It is to be assumed that the music of the Jews was an outflow of that of the Egytians and Assyrians. The names of instruments which occur in the Bible,—harp, psaltery, cymbal, trumpet,—refer to instruments similar to Egyptian and Assyrian. H. Lavoix observes concerning the following passage from the Book of Daniel, that the names of the instruments are given in the language of the conquerors, and that it is by this we learn the Assyrian names.

"That at what time ye hear the sound of the cornet,* flute, harp,† sackbut, psaltery, dulcimer, and all kinds of musick, ye fall down and worship the golden image that Nebuchadnezzar the king hath set up."

Something, however, like positive evidence of Hebrew music exists in the inscriptions to the Psalms. Mr. J. J. Stewart Perowne in the preface to his edition of the "Book of Psalms" gives some results of his investigation of these inscriptions which are highly suggestive. By this writer's research into the musical

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* "Cornet" here refers to a kind of trumpet.

† "Harp" in our translation of this passage is "tambourah" in the French. *Sackbut* which with us means a wind instrument is given in the French, *Sambuque*, a species of harp.

part of his subject the following interesting particulars are brought to light:—That "A song" (Shir Mizmor) signifies "a psalm properly as sung with instrumental accompaniment." That some titles specify the kind of instrument or instruments by which the psalm is to be accompanied, as for instance, "to the flutes," "with stringed instruments," or "upon a stringed instrument." That others refer to the measure; thus, "after the manner of maidens." (Alamoth), Ps. xlvi: Whilst others again are technical; thus, "upon the octave below" (Sheminith) Ps. vi. and xii. The two last mentioned kinds of reference occur in that portion of the description of the carrying the ark from Obed-edom which is contained in the following verses:—

"And Zechariah, and Aziel, and Shemiramoth, and Jehiel, and Unni, and Eliab, and Maaseiah, and Benaiah, with psalteries on *Alamoth*."

"And Mattithiah, and Elipheleh, and Mikneiah, and Obed-edom, and Jeiel, and Azaziah, with harps on the *Sheminith* to excel." I. Chron., xv. 20-21.

With reference to the title "Song of degrees" J. J. S. Perowne remarks, "Probably the songs with this title were composed for the 'goings up' to

the yearly festivals at Jerusalem. Hence the title 'Song of the goings up,' 'A pilgrim's song.' That the caravan went up with singing is evident from Isaiah xxx. 29."

"Ye shall have a song as in the night when a holy solemnity is kept; and gladness of heart, as when one goeth with a pipe to come into the mountain of the Lord . . . . . "

Mr. Perowne interprets other titles as intended to specify the particular melody of the psalm. Thus, after the song beginning, "Hind of the Dawn." Ps. xxii. "The silent dove in far off lands." Ps. lvi. These titles he considers were "probably the first words of some well-known songs."

Opinions are much divided as to the explanation of the word "Selah." Perowne, however, considers that as it is most frequently introduced at the end of a strophe it would seem more probably to imply the intervention at the particular place of a musical symphony.

These few inscriptions as thus interpreted are loopholes through which we catch glimpses of Jewish daily life; we feel the soft freshness of the Syrian dawn—hear the primitive music of the caravan as it toils up-

hill, and almost catch the simple Temple hymn, "after" some popular strain. Also the fact impresses itself upon us vividly that whatever the musical art of the Jews really was, there mingled with their daily life that wild growth of melody which seems almost as inalienable an heritage of man as speech and movement.

We may perhaps consider that the psalms were connected with an advanced use of music by the ancient Jews. Thus Professor H. Graetz in his "History of the Jews," writes: "Through Samuel (1100-1067 B.C.), a new element was introduced into the divine Service of the Israelites —*viz.*, songs of praise. Samuel, the ancestor of the celebrated psalmists, 'the sons of Korah,' was the first who composed songs of praise for divine service. The charms of poetry and harmony were by Samuel brought to bear upon the service of religion, and they left a lasting and ennobling impression on the minds of the people. The employment of choirs of Levites and singers rendered the sacrificial rite of minor importance." Again: "The foster child, as he was, of the Levitical choir, a poet and musician, David (1055-1035 B.C.)—following Samuel's precedent—acted

as might have been expected, in introducing choral singing into the solemn religious services. . . . Samuel's creation of a spiritual divine service was thus firmly established by David; and though he praised sacrificial rites he also introduced psalms into part of the services as being more adapted to elevate and purify the mind."

But another form of music than what I may term lyrical (whatever it might have been like), was adopted by the ancient Jews. This was connected with an occasion for the use of music other than the occasion of the sacrifices or than that of their ideal revival in a higher spirit, namely, the saying of prayers and the "reading of the law." This latter was in temple times the main object for which the people assembled in the synagogues. Concerning the style of the music used in these circumstances, the Rev. Francis L. Cohen (to whose interesting and instructive article "Song in the Synagogue" which appeared in the "Musical Times" of August 1, 1899, I am indebted for my information on this part of our subject) says:—"This (the intonation of the prayers) was the custom already in temple times when even the Levites in the Temple Choir used to proceed to the synagogues to study and

worship after taking part in the sacrificial ritual of the Sanctuary. From the very earliest days of the Synagogue the Jew has been exhorted to utter *with the singing voice* every word recited aloud in the Service. Already, therefore, ages ago, syllabic monotone must have begun to develop into cantillation, and a form of plain-song to come into existence."

It is interesting to observe that there is a peculiar agreement between Professor H. Graetz and the Rev. Francis L. Cohen on the fact of music aiding to form an influence that operated as a substitute for the sacrifices. As we have seen two allusions to this occur in the passages recently quoted from Graetz in which he states the respective shares in this reform of Samuel and David. The reference to this subject by the Rev. Francis L. Cohen is as follows: "In the dispersion, it (the reading of the law) became even more the central point of the Jewish ritual, for the recital of the sacrifices took the place of the sacrifices themselves, when the Jews enjoyed access no longer to the one spot where sacrifices were permitted."

Although musical instruments had been so largely employed in the Temple of Jerusalem, after the fall of the Jewish State the people for a long period volun-

tarily abstained from all use of music save in worship, and thus had no secular association with instruments. Perhaps it was in this spirit that the psalm, "By the rivers of Babylon" was inspired. It may also have been in the same spirit of particular regard for the past under the sense of exile, that, at this period, to quote Mr. Cohen, "a Rabbinical 'fence to the law' came into force, which prohibited the use of instruments on the sacred days, on the ground of their then almost inevitably needing repair or tuning, and so tempting the performer to turn from art, which is not in itself prohibited on the Day of Rest, to labour, which is;" Mr. Cohen adds, "the practice of centuries has lent sanctity to this protective prohibition; and thus the music of the Synagogue is still chanted without accompaniment on the Sabbath and the Festivals."

In the tradition of Jewish Worship music we have a living clue not only to the style of ancient Hebrew music but to that of ancient Eastern and early Western music. In the time of the Temple—from the days of Ezra*—the prayers, praises and lessons (Pentateuchal and Prophetical) were *chanted*—at first by certain

* Arrived in Jerusalem from Babylon 459-458 B.C.

private members of the congregation; but afterwards it was found expedient that the recital of the lessons should be entrusted to a well skilled reader, and that the prayers should be led by an official who would be certain because of his office to be provided with a manuscript. Then, with the ever-growing accretion of adornments to the traditional chants, a professional Precentor became necessary. Termed "Reader" in the Temple he was known as "Messenger of the Congregation," or "Overlooker" in the Synagogue. Then—still in the days of the Sanctuary—this precentor inaugurated that sequence of specialists in synagogical vocalisation by whom the tradition has been perpetuated; and while these have in each succeeding generation amplified their repertory according to the tonal fashion of their day the vigour of tradition in Jewish observance has brought down to our own times many strains of hoar antiquity.*

Hebrew like other semitic tongues has an alphabet of consonants only, read from right to left. In the more

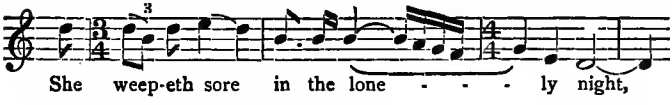
* I have largely used Mr. Cohen's words in this description, as well as in other places where facts relating to Jewish worship are referred to.

ancient form, as in the scroll read by the officiant above referred to, only the consonantal text would be given, but after it became customary to designate the vowels by little strokes and points added below or above the consonants which they voice, the cantillation (and also the syntax) was indicated by small dots, strokes or curves (called neumes or accents) accompanying the vowel points. This punctuation only came into general use about the sixth century but it then probably embraced the ancient tradition. At any time, the Jew, who, whilst being assimilative is strongly conservative, would in his music keep a firm hold upon the traditions of the past. We shall come upon an example of this when speaking of the modal feeling in Hebrew music.

The Jewish tradition connected with these signs seems to throw light on their use in early Christian music. One of two names which were applied to them by the Jews, *Neginoth* (strings, musical notes), identifies them with actual sounds. The other name is Ta'amin (ornaments, tropes). Mr. Cohen adds:—"It is pretty clear that they are literally a *cheirography* or rough diagram of the movement of the voice in declam-

ation as conventionally designated by the movements of the teacher's hand, and their musical value gives us a fair idea of that bardic intonation interpreting the text chanted, which for the ancients constituted melody as time does for us."

We have in fact in this kind of effect an embryological music in which melody and a regular accentuation are nascent but which actually consists of melodic touches, varieties in sustentation of sound and of pace, and the two rhythms, duple and triple; mingled irregularly—these different elements of musical form being as yet only held together—unified—by the accompanying language, whose meaning and spirit it is their whole object to express. The following short passage, extracted from a very full illustration given by Mr. Cohen, will enable the reader to form an idea of the effect referred to.



We shall see later on some likeness of this primitive form of expression, in early Christian music pointing to the conclusion that that regular arrangement in sym-

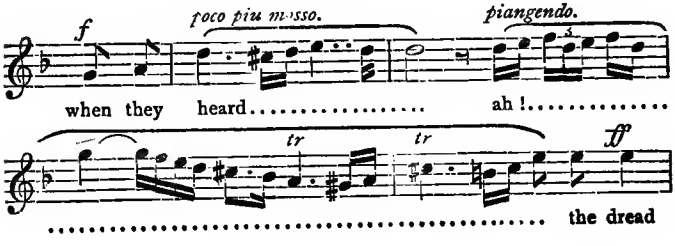
metrical shape of the above mentioned elements, which seems fundamental to modern effect, is a result of gradual development.

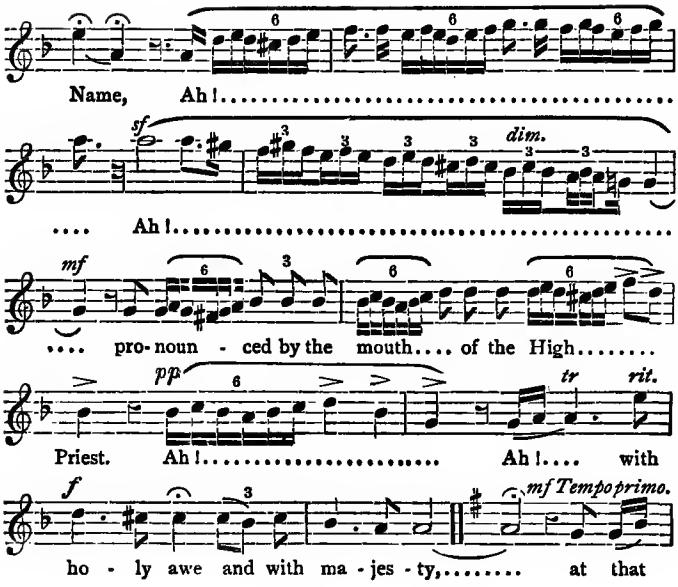
What comes clearly out of this study is, that ancient Jewish music was homophonal, or melodic. In the circumstances of Jewish worship that we have been considering the melodic form was the only possible outlet because the entering into the spirit of the text was imperative—whilst harmonic effect, at most, could only have been introduced tentatively and intermittently. This fact may contribute to that exuberance of irregularity which we find in this melody—an irregularity which in more modern music would probably spring out of excited feeling—passionate or joyful—or might be used descriptively, but which in the actual circumstances expresses all feeling including the deepest and most solemn.

Concerning the modal differentiation of this music, that is, the scale forms it involves, Mr. Cohen gives us the following valuable information:—"These modes," he remarks, "are all of an antique or Oriental character, and include not only those tonalities familiar to the students of the Church plain-song, but also others preserved in the Byzantine and Armenian

traditions, in the folk-song of Eastern Europe, or in Perso-Arab and even Hindu melody. The modal feeling of Jewish Worship music is thus still in many ways reminiscent of the musical theory and practice of Eastern Asia, which dominated the ancient world, and still rules from the Slav lands of Europe away to Southern India."

There can thus be no doubt whatever as to the type to which the effect of ancient Hebrew music belonged. The oriental character of that effect together with the peculiar combination of bizarre form and earnest spirit to which I have just referred, are perceivable even in the following short extract, which is from the transcription of a traditional rhapsody which Mr. Cohen says is "replete with an emotion often transcending mere verbal utterance." It is introduced in the recital of the "Additional Service," on the most solemn of all the occasions of Jewish worship, the Day of Atonement.





Thus far we may be able to form some idea of the kind of development which ancient Jewish worship music represented, and of its effect. The question will, however, perhaps suggest itself to the reader: what was the musical form and the general kind of effect of those seemingly freer and more independent lyrical effusions which occur, or are alluded to, so frequently in the Bible—in the rendering of which large bodies of singers and instrumentalists

joined? Graetz thus refers to one of these performances:

"The festival celebrating the feast of the Passover by the entire nation summoned by Josiah (621 B.C.) was rendered especially inspiring by psalms accompanied by the singing and harp playing of the Levites. One psalm (81st) has been preserved." J. J. S. Perowne gives the opening of this psalm thus:

[For the Precentor. Upon the Gittith.* (A psalm) of Asaph.]

1. Sing joyfully unto God our strength.
   Shout aloud unto the God of Jacob.
2. Raise a song and bring hither the timbrel,
   The pleasant harp with the lute.
3. Blow (the) cornet in the new moon,
   At the full moon, on our solemn feast.

Now in the study of Mr. Cohen's article, which has so materially aided us in acquiring a clear idea of ancient Jewish worship music, we shall I think find the key to the style and effect of the more independent effusions we are considering. The following passage puts us on the track:

"The vocal interpretation of the accents used in the

* Either an instrument which took its name from the city of Gath, or a kind of measure or melody (? mode).

poetical books, Psalms, Proverbs, Job,—was still retained until about the fifteenth century; but it has since been forgotten owing to the greater congregational advantage of an unvarying chant for poems consisting of verses of fairly equal length."

According, then, to the official interpretation of the accents up to the fifteenth century (which would be the tradition in the synagogue representing the effect of the ancient chant) this chant would vary with the different verses, in the case of the poetical books. Presumably then the effect of the varying chant belonged (to use Mr. Cohen's words which we have already quoted) "to that bardic intonation, interpreting the text chanted, which for the ancients constituted melody as tune does for us."

It will tend to support the above presumption if we consider that metrical effect was not the leading feature of the outward form or framework of Hebrew poetry as it is of modern—that the sensorial charm it gives to the latter was by the Hebrew poets supplied by another kind of effect. Instead of symmetry of sound there was a symmetry of sense. A "verse" consisting of two members* embodying a certain parallelism of

* As a rule, it may consist of three.

expression, corresponded to the metrical "line." Thus instead of a flow of accentuation filling up a definite measure, as in the line:

> "Brought death into the world and all our woe"

the outer sensorial charm depends upon a parallelism of expression, as in,

> "Therefore shall the strong people glorify Thee,
> The city of the terrible nations shall fear Thee,"

or a symmetry of thought, as in

> "Day unto day uttereth speech,
> and night unto night showeth knowledge."

Sometimes the order of the ideas in the two members of the verse is reversed thus:

> "Have mercy upon me, O God,
> According to Thy loving kindness,
> And according unto the multitudes of Thy tender mercies,
> Blot out my transgressions."*

I have said perhaps more than sufficient to show that the instinct of form with the ancient Hebrew poets did not take the shape of a regularly measured accentuation. It is therefore unlikely that this effect was a pro-

* This subject is treated more fully by R. G. Moulton in his work "The Ancient Classical Drama," pp. 71, 72. Also by S. R. Driver in his "Introduction to the Literature of the Bible."

minent feature in their vocal music. On the other hand it seems probable that such rhythmical phrases as it might have contained would, as in the examples of worship music given, vary from our standard somewhat incongruously, and occur without system. We must, then, in trying to imagine the effect of these vocal musical utterances dismiss from our minds anything of the nature of a sustained melody, or even of a strain of free spirit and form, for the charm or impressiveness would lie between the music and the language. It might have been that at this period music in its development in the direction of expression had not freed itself from language. But supposing there were definite musical phrases they would belong to one of those ancient Oriental modes or scale-forms of which, as Mr. Cohen says, those still used in the synagogue are in many ways reminiscent.

As regards the instrumental contribution to the effect it seems probable that though attending the vocal, it would not enter organically into it. The two would probably represent different stages in musical development, the vocal being on the way to the main path and higher ground, the instrumental remaining primitive. On the occasion referred to in Psalms 68,

25. "The singers went before, the players on instruments followed after; among them were the damsels playing with timbrels," a procession to, or in, the Temple seems going on, in which circumstances the respective effects contributed by the singers and players though connected in order of succession might be quite independent effects.

The trumpet played an important part in Jewish sacred festivals. One of the forms it took (called the *shophar*) is especially remarkable as being the only Hebrew instrument which has been preserved to the present day in the religious services of the Jews. It is commonly made of cow's or ram's horns—in the latter case, it is said, in remembrance of Abraham's sacrifice which according to the Jewish tradition was on the New Year's day.* Hence it is still blown, as in time of old, at the Jewish New Year's festival. In the ceremony of bringing the ark into the temple, as ordered by Solomon, music played an important part. It is thus described 2 Chronicles, 5. 12, 13.

"Also the Levites which were the singers, all of them of Asaph, of Heman, of Jeduthun, with their sons and their brethren, being arrayed in white linen,

* David Levi, "Rules and Ceremonies of the Jews."

having cymbals and psalteries and harps, stood at the east end of the altar, and with them an hundred and twenty priests sounding with trumpets."

Now returning to the question as to whether there was an organic connection between the instrumental and vocal portions of these great expressions, it will be noticed that in the continuation of the above description such a connection is distinctly stated as existing between the effects of the trumpets and the voices:

"It came even to pass, as *the trumpeters and singers were as one; to make one sound* to be heard in praising and thanking the Lord; * * "

The effect of the lutes and harps in this concert we may perhaps form some idea of by considering (1) that if they gave forth melodies these would necessarily be short (as only a little way, if any, could at this period in the development of the art, have been made in modulation) and they would be probably introduced in the pauses of the voices, or before or after them; (2) that if the playing of these instruments mingled with the general effect, as frequently described in the Bible, they would in all probability give forth certain simple rudimentary effects at places where, as in the case of the trumpets, such effects would be "as

one," or in accord with the voices, for the sense of consonance and dissonance, or of concord, which prompted these people to bring this about in the case of the trumpets would assuredly influence them similarly in the case of the lute and harp. Of one thing we may feel sure that whatever the artistic effect of these musical utterances may have been they were informed with the greatest earnestness and elevation of spirit, as in the case of that just referred to, when the ark of the covenant was brought "into the most holy place, even under the wings of the cherubims."

Perhaps related in the Hebrew mind to the instinct prompting the parallelism of expression to which I have referred, is that strong feeling for antiphonal effect so conspicuous in the bible and which in the Psalms has led to the conclusion that the Jews practised *alternate* singing of this nature in their worship in the temple. The cxxxvi. Psalm with its regular repetition of the sentence "for His mercy endureth for ever," is regarded as an evidence of this. J. J. S. Perowne remarks concerning the arrangement of the lines of this psalm that "According to an old rule of writing observed in some of the most ancient MSS., the two lines of the verses ought to be arranged each in a

separate column, or, as the phrase runs, 'half brick upon half brick, brick upon brick,' thus:

O give thanks unto Jehovah, for he is good;
For his loving-kindness (endureth) for ever.
O give thanks unto the God of Gods;
For his loving kindness (endureth) for ever."

He also in a note quotes the following as suggesting that in early Christian times it was the custom to sing the above psalm antiphonally:

"One February night, A.D. 358, the great church at Alexandria was bright with lights far into the night, and still the congregation did not disperse. The Bishop Athanasius was there, and the service was to be prolonged till morning, for next day the Holy Communion was to be celebrated, and it was the frequent custom among the early Christians to spend the preceding night in prayer and singing hymns. All knew that further troubles were hanging over their beloved Bishop, and that the time of his presence with them would probably be very short. Suddenly a clashing noise broke the stillness—the church was surrounded by armed men—with calm presence of mind Athanasius rose and gave out the 136th Psalm, which has to every verse the response 'For His mercy, etc.'

The whole congregation joined in thundering forth those grand words, when the doors burst open, and the imperial envoy at the head of a body of soldiers walked up the aisle. For a moment the soldiers drew back in awe at the solemn sound of the chanting, but again they pressed on, and a shower of arrows flew through the church. Swords flashed, arms rattled, and rough shouts interrupted the music. Athanasius retained his seat till the congregation had dispersed. Then he too disappeared in the darkness, and no one knew where he was gone. He found a refuge among his own friends, the Hermits of Egypt."*

The 106th and 118th Psalms open with the same liturgical formula as the 136th.

Another example of the strong feeling in the Jews for antiphonal effect, at least in their poetic expression, is thus finely treated by R. G. Moulton:

"In the latter part of the twenty-fourth psalm the summons to the everlasting doors to open, is as it were met with a challenge from within:

Who is the King of Glory?

to which there is the response—

* This incident is also described by Gibbon. See "The Decline and Fall," etc. Vol. III., p. 381.

The Lord strong and mighty;
The Lord, mighty in battle.

"Again—in a manner suggesting the passage from one to another in a series of outposts—the summons is repeated, and once more the challenge follows: the reply gathers force at each repetition:—

The Lord of Hosts
He is the King of Glory."

This leaning to the dramatic in poetic form, by the Jews, would almost of itself suggest the improbability of their failing to avail themselves in their sacred musical outpourings of such an easily arranged yet fundamental effect as antiphonal effect—an effect which with us inevitably tells, whether within the orchestra, within the chorus, or between the two; or between a band in the orchestra and one on the stage; or music before and behind the curtain.

If, however, the antiphonal verses to which I have referred in the 136th, 118th and 106th Psalms were sung alternately it follows that the music to the phrase repeated—the answering phrase—would, like that phrase, have a comparatively independent form—that is, stand out from the musical context as the above phrase does from the literary context. The same con-

clusion is suggested by the repetition of the sentence, "How are the mighty fallen," which occurs three times in David's lamentation over Saul and his son Jonathan. It is extremely probable, then, that the higher music of the Jews was not confined entirely to the bardic style, following the sense of the words, but assumed occasionally short forms which though allied to language had a certain independence. J. J. S. Perowne's interpretation of some of the titles of the psalms, to which I have referred, seems to harmonise with this idea. It is also probable that in both styles there occurred at times at least touches of melodic beauty.

Through our familiarity with the Bible we are so strongly impressed with the inherent poetic feeling and deep spiritual earnestness of this people that we cannot conceive but that these qualities within them must have given an uward impulse to their musical art. The fact that they made it such an important accessory to their religious ritual tends to favour and in a vague way confirm this idea. It seems more particularly probable that they developed vocal effect, as this was certainly employed by them under circumstances remarkable and unique.

CHAPTER IV.

Assyrian and Babylonian Music.

MUSICAL art seems to have been as prominent a feature in the life of the Assyrians at Nineveh and Babylon as in that of the Egyptians; and of the same general character. Upon Assyrian bas-reliefs figure representations of the harp, lyre, lute, double flute, small drum (or timbrel struck by the hand, which the Persians still use), long drum, with cymbals and asor,—an instrument consisting of nine strings, stretched over a horizontal sounding board, and held before the player.

The interpretation of the bas-relief of this instrument is somewhat confused. H. Lavoix, who terms it *asor*, says that the instrument was played by the strings being struck by two little hammers; but the

copy of the bas-relief which he gives shows the player with a small stick of no special shape (the function of which might be that of a hammer or a plectrum) in his right hand whilst with his left he seems to be either twanging the strings or checking undesirable vibration. Again, Carl Engel whilst agreeing that the above interpretation constitutes about all we learn with certainty from the bas-relief, calls the instrument a *dulcimer*, and associates it with an instrument of high antiquity in Persia, called *Santir*, which in construction and mode of treatment is almost identical with the German *Hackbret* or *Cimbal*, of which the strings are of wire and which is played with two little sticks having small oval knobs at each end.

Whether the strings were twanged or struck, the instrument represented by the bas-relief in question may be regarded as in principle the same as the psaltery of the middle ages which gave rise successively to the clavicembalum, clavichord, spinette, harpsichord and piano. Assyrian instruments seem to have mostly descended from the same source as Egyptian, but they are inferior in design though less ancient, dating ten centuries B.C. The harps have more strings but there are fewer kinds, whilst the flutes are shorter.

The bas-relief in which the player above referred to appears is the largest of those discovered. It is in the British Museum but may perhaps with advantage be here described. It is a musical procession of Assyrians on their way to meet a conqueror. A harper takes the lead; behind him are two musicians walking abreast, one playing a dulcimer, or asor (the instrument we have been referring to), the other, a double flute; then follow three more harpers, the last a female; then come five more female musicians, three playing upon harps, while one is blowing a double pipe and the other is beating a small hand drum covered only at the top; then follows a chorus of females and children, forming a double line, some clapping their hands whilst the first and the last of the females are holding up their hands as if marking the time. But another of the females is holding her hand to her throat "in the same manner" (Carl Engel remarks) "as the women in Syria, Arabia and Persia are in the habit of doing at the present day, when producing on festive occasions those peculiarly shrill sounds of rejoicing which have been repeatedly noticed by oriental travellers." Concerning these sounds he also quotes the following interesting

remarks from a work entitled, "Travels in various countries," by E. D. Clarke (Part II., p. 121). "They are caused by trilling the tongue against the roof of the mouth, without the utterance of any distinct words. Yet this singular mode of expressing joy is all that constitutes the *Alleluia* of the ancients. When Lord Hutchinson first entered Cairo, after the capture of the city, he was met by a number of women who greeted him with *Alleluia;* they accompanied him through the streets, clapping their hands, and making this extraordinary noise in a loud and shrill tone. It seems to be a constant repetition of the same syllable, *al*, uttered with the utmost rapidity."

The instrument I have been speaking of, which it will be convenient to call henceforth Dulcimer, seems, so far as the representations go, to be the one kind of instrument possessed by the Assyrians which the Egyptians did not possess. But such merely negative evidence would obviously be very weak ground on which to form the latter conclusion. It is, however, not a kind of instrument so calculated to lead immediately to variety of form in musical effect as the lyre or harp, on either of which the player has five notes under the control of each hand to one in the case of

the instrument in question. If, however, Egyptian representations do not include a specimen of this instrument they include several of one far more important, namely, the lute or tambourah. It will be convenient if henceforth we call this instrument tamboura. Only a single resemblance to it had been discovered on Assyrian monuments up to towards the end of the last century and that reveals no strings or pegs but as it shows two tassels hanging from the neck towards the end it had probably only two strings. But the tamboura figures in Egyptian representations so frequently and in such fullness of detail both as regards the instrument itself—its completeness, finish and elegance—and the evidence of expertness, versatility, naturalness, grace and every subtle suggestiveness of ripe mastery, on the part of the player, as to convince us that it was a most important if not the leading instrument of the Egyptians. I have already referred to the signal importance of this instrument from the point of view of musical development. It is the one instrument of antiquity in which the possibility of modulation is not barred at a certain distance but is quite open.

Carl Engel suggests that the Assyrians possessed

the taste for a softer music than the music of the Egyptians, on the ground that in the respective groups of instruments in the representations, instruments of percussion are less prominent in the case of the Assyrians than in that of the Egyptians. The Rev. George Rawlinson* assumes that the music of the former was superior to that of the latter on the ground that the Egyptians were a stagnant people whereas the Assyrians were a more progressive people, and braver in war. To me the more pressing question for the present seems to be, what kind of effect was that which breathed from that development of the art which was common to both these peoples? for that the general scope and broad character of musical effect was the same in the cases of both, the almost perfect likeness between their respective instruments leaves scarcely any doubt. Honestly, straightly and taken as a whole, this question cannot be answered. We do not know what the effect of this music in its full manifestation was like. But some things about it we may reasonably conclude. One is that this ancient music generally was not barbaric. Neither trumpet, drum nor

* In "The Five Great Monarchies of the Ancient World."

cymbal, figure in the principal groups—except in the case of a military band. The only penetrating instrument is the double flute but that appears as a rule in company with one, or more than one, harp, lyre, and (in the case of the Egyptians), tamboura; whilst the tamboureen appears but occasionally. There remains the effect of the clapping of hands but this though unique could not be overpowering. But the most important conclusion to be drawn from these representations is that this music embraced as well as melody the application of harmony in accompaniment. When we consider with what evident freedom and command the musicians in so many cases in these representations are playing on harp or lyre, with, it may be five fingers in opposition to five, or five to a plectrum, it is against all probability not to assume that they are playing some kind of melody and accompaniment. A child or savage if got to handle a harp or lyre as men and women are doing in these representations, would inevitably fall into devising some crude antiphonal effect. This conclusion, however, is to a certain extent supported by more direct evidence. Carl Engel, who in his work "The Music of the most Ancient Nations," takes a broad survey of the music and musical instru-

ments of present uncivilised peoples, calls attention to the strong resemblance between the form and method of holding the Assyrian lyre in one of the representations, and a lyre still in common use in Nubia, Abyssinia, and one or two other parts of Eastern Africa. Both instruments are trapezate. In the Nubian instrument (called Kissar) the strings (of which there are five) are tied round the front bar, which is slanted to allow of their being tuned. In the ancient instrument the front bar is also slightly slanted, so the attachment of the strings, which appear to have been four, was probably the same, and more particularly as this was the general way of attaching the strings of the ancient instruments. Again in the modern case the player uses the plectrum with his right hand and twangs the strings with his left (using plectrum and fingers either alternately or together), and these actions the attitude of the player of the ancient instrument also points to. Moreover there is some legendary evidence which tends to associate the *Kissar* with the ancient lyres of Egypt and Assyria. The modern Egyptians call it *qytârah barbaryeh* which indicates that it is considered the national instrument of the Barrabras or Berbers, who are believed to be the descendants of the original in-

habitants of Egypt; whilst the Abyssinians have a tradition according to which it was introduced into Ethiopia from Egypt by Thoth or Hermes, at a very early period.

These two instruments then thus resembling one another and being thus associated, a specimen of the use of the modern instrument in actual music may perhaps suggest something of the form of the music produced by, or in connection with, both the ancient Assyrian and Egyptian lyres.

* KISSAR.

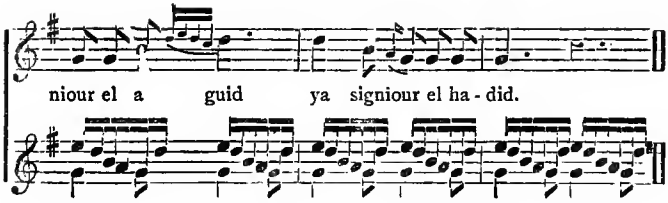
Accomp. with the fingers of the left hand.

Accomp. with the plectrum of the right hand.

VOICE.

Na - ve na - ve be nahaf - - ya seg -

* Carl Engel's description of the Kissar as well as the songs given, called *ghouna*, are taken from a work by M. Villoteau entitled "Description de l' Égypte" (tome xiii. p. 365, and tome xiv. p, 260.) M. Villoteau remarks that in the words of the above song are found not only Arabic but also corrupted Italian words.



We must, of course, not regard the foregoing as fairly illustrating the resources of musical effect attained by either the Assyrians or the Egyptians. It represents more probably an extremely primitive stage in the development of the musical art of each. We have to bear in mind the far more extended resources involved in their harps, and the unlimited access to musical possibilities which they had in the tamboura and the human voice. We may, in fact, observe a likeness of that unlimited access in the case of the voice, in the above example, in bar five,* where though the accompaniment is necessarily confined to the five notes of the instrument the voice exerts its freedom to take in more extended effect. What in virtue of these two open avenues to effect,† combined with their other resources, the reach and character of musical expres-

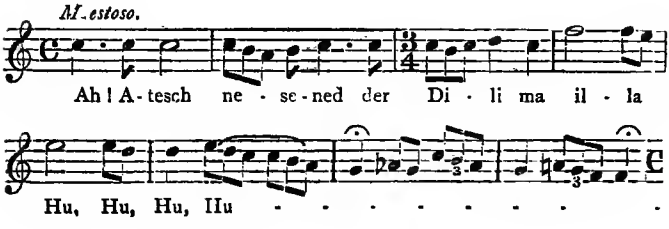
* At the F♮

† Those involved in the possibilities of the tamboura and the voice.

sion had got to be like with these peoples at the stage of development to which in each case the musical instruments in the representations relate, we cannot, as I have said, form a positive idea of; but considering the instruments, their combinations in the groups, the expression in the attitudes, and the fact that at the periods involved music had with both peoples long been a cultivated art, the probability is that the reach and character of its expression was in each case something far larger than is exemplified in any of the four examples of present Nubian music from which the above is selected. With all this, however, we have to remember that this music whatever its melodic or harmonic development might have been, would necessarily take in but the outer threads of that more extended kind of construction which depends upon our system of related scales, and would consequently lack a proportionate fullness of expression as well as certain notes of feeling peculiar to those western peoples that were destined to inherit and pass on the enlarging musical tradition.

Another striking example in which the living music of an oriental people would seem to throw light on ancient eastern music is the following. It is one of

two choruses of the Mewlewi Dervishes, given by Carl Engel in the work recently mentioned, and though being monodic it is unsuggestive as to harmony or accompaniment, it gives us a more extended view than the preceding example of what I may term embryological growth in music. Concerning these two choruses Carl Engel makes the following remark. "The above two choruses of the Mewlewi Dervishes are taken from the Abbé Stadler's reliable collection. They form part of those choruses which are usually performed at the religious dances of the above sect of Dervishes in Constantinople. It will be observed, that in order to convey a correct impression of their rhythmical character, several peculiar means have been resorted to in committing the music to paper—such as the frequent employment of pauses, of different kinds of bars, and of indications of change in the time."



più mosso.

Hëï Jar! Hëï Dost! Dscha-ni-men Dscha-na-ni men!

Maestoso.

Ku - teh ni - kü - ned men - si - li - ma il - la

Hu, Hu, Hu, Hu - - - - -

più mosso.

Hëï Jar! Hëï Dost! Dscha - ni-men Dscha-na - ni-men! Ger

Maestoso.

A - lim Jan dschümle Ta-bi ban ba - sched Hal - li

ne - kü-ned müsch - ki - li ma il - la Hu, Hu,

più mosso.

Hu, Hu, - - - - - - Hëï Jar!

Hëï Dost! Dscha - ni - men Dscha - na - ni men!

Now in the foregoing chorus we observe in the first bar a quite natural musical form of invocation; then occupying respectively the next two bars, follow two different phrases which as they occur several times in

the piece form as it were a salient feature of it. These pass into a kind of raised strain in which melody is prompted by a strenuous feeling for expression. In the course of this strain, where the note G is reached (in bar seven*), a quasi passing modulation into G is felt. Then after bar seven, in which the augmented second so characteristic of Eastern music is used, a similar half modulation, but back to C, leads to two characteristic phrases which seem to constitute a kind of *refrain*. These are followed by a new but shorter melodic outflow which leads to another passing and imperfect modulation into G. Now the matter involved in the foregoing description constitutes the whole of the original matter of the chorus, but it is *repeated*, and then† come six bars in which certain of the preceding phrases again recur and in the last two are *contracted* forming a kind of *stretto;* after which another repetition of the music above given (less the first three bars), completes the piece, which thus ends in the fifth of the key. This chorus certainly supports the view that the musical instinct is inherent in man and fundamentally the same all the world over, for there is in it distinct beauty and

* (At the *pause*). † (At the second *più mosso*).

expression in melody, the feeling for modulation, for form (in the relation of its larger sections), for cumulative effect, and for unity.

At the same time the reader will not fail to observe how closely the above example—in the varying time, the uncertain tonality, the use of the augmented second, and the prompting to melody by strenuous feeling for expression, resembles those I have given as indicative of the character of ancient Jewish music; and what strength these common points between an extant chorus of a section of Dervishes in Constantinople, and the traditional chanting of the Jews—this correspondence of evidence coming through such different and widely separated channels—gives to the hypothesis that in general form and effect the type of these examples was actually that of early melody.

In closing my remarks on ancient Egyptian and Asiatic music I may point out that the approximate period of the Assyrian monuments would about synchronise with that of the apogee of Jewish national life—the period of Samuel and David.*

* H. Lavoix gives the date of the Assyrian monuments as B.C. 1000. H. Graetz gives that of the apogee of Jewish national life as between 1067 and 1055 (B.C.)

Also it may not be irrelevant if I here attempt to conjure up a feeling of the living atmosphere in which the music we have been studying was heard, by glancing for a moment at some of the surrounding circumstances.

First as regards the Egyptian monuments and representations, the cuneiform tablets discovered only recently at Tel-el-Amarna (to which place they had been brought from Thebes) reveal that 150 years prior to the date of the Egyptian harp and harpist a representation of which has been given, the nations of the Orient were not isolated units cut off from one another, but their mutual relations were as close and intimate as those of modern Europe; for these tablets are the correspondence of the Egyptian Foreign Office of the time, and include letters from the kings of Babylonia, Assyria, and Mesopotamia, besides from the Egyptian governors and vassal princes in Canaan and Syria. They also prove that as far as literature was concerned this ancient world was as civilised as our own, for there were schools and libraries all over it; and that the high roads and postal service were alike well organised. This would be about B.C. 1400, a full century before the Israelitish Exodus.

Coming down to the period of the Assyrian representations and of the apogee of Jewish national life, we find the nations of the Orient still in intimate knowledge of one another, and general intercommunication; for Solomon (B.C. 1015-977) "reigned over all the kings from the river* even unto the land of the Philistines and to the borders of Egypt."

The reader will not fail to observe that the above circumstances tend to support the conclusion that has been drawn from the similarity of the musical instruments of these ancient eastern nations; namely, that a single musical system was general among them. Also that they further impress that whatever the effect of this music may have been it was even at that far back period portion of "the long results of time."

LIST OF DATES REFERRED TO IN THIS CHAPTER.

Period of Tel-el-Amarna Tablets	About B.C.	1400
" " Israelitish Exodus	" "	1300
" " Egyptian Harp discovered by Bruce	" "	1250
" " Assyrian Monuments	" "	1000
" " Apogee of Jewish National Life ...	Between "	1067 & 1055

* The Euphrates.

CHAPTER V.

Ancient Greek Music.

FROM Egypt and Assyria the historic stream of music passes to Greece. But I must not convey that musical art ceased among one people as it passed to another. It continued in Egypt whilst the instruments were sounding from which the bas-reliefs of Nineveh and Babylon were copied. It mingled daily with the busy life in both countries whilst the Hosanna rose in the temple at Jerusalem; and still persisted when this had ceased—when the Hebrew was led into exile—and whilst a national style was rising in Greece the development of which it was destined to aid.

The history of early Grecian music is veiled in myth. The struggles of the various races which in-

vaded Greece from all sides, are symbolised by the strivings for supremacy of their respective popular musical instruments. Thus the contact of Dorians from the mountains of Thrace with peoples from Egypt and Phœnicia is symbolised by Apollo, who holds a primitive lyre, contending with Mercury who bears a cithara of many strings. But in these myths we observe certain features which are common to every early phase of musical art. The musical promptings of an isolated people centre and so to speak crystalize in a certain instrument which becomes the only access to their repertory of effect, and in the construction of which their system or its salient points are fixed. Now what does this suggest? Let us suppose the instrument to be the early Greek lyre, which consisted of four strings attached to the shell of a tortoise covered with a tightly stretched skin for sounding board. Preliminarily it may be remarked that it is not improbable that the melody performed by aid of this and similar primitive instruments was not always confined to the notes of the instrument. These might mark only certain points in the song or dance (with both of which music in its earlier stages was almost invariably connected) whilst serving to keep the

voice up to pitch and to accentuate the rhythm. Mr. Robert Charles Hope states that to the time of Terpander (c. 780-700 B. C.) in consonance with Asiatic custom, only the prelude was played upon the lyre. As, however, Terpander is credited with having composed for the priests at Delphi some hymns of which the words were accompanied by the lyre, one note going to each syllable, he appears to have initiated a practice going at once to the other extreme. The use of the lyre in accompaniment is said to have begun to be influenced shortly afterwards by one Archilochus (c. 680 B.C.), who through contact with traders from Tyre in Phœnicia had learned the use of a triangular shaped instrument of the lyre type,* on which an independent accompaniment was played. This statement bears a character of probability in that it exemplifies that action upon musical art which has been an essential condition of its growth, namely the influence of different peoples. To proceed—whatever might be the particular relation to the song, of the lyre when it was the representative instrument of an isolated people, at such a time the only avenue for an aspirant to the definite

* Probably an Asiatic sample of the Egyptian Trigon.

world of musical art would be through this instrument; and this avenue would be guarded by the guide, or professional player, who would hold the message from the past and thus occupy the standing ground of new effort. For in the absence of a musical notation—that is, when all music was tradition—the master—the bard—who was singer and player—was the sole eyelet to the muse's "wild universe"; he was the magician who alone could raise the past. And an aspirant unable to gain access to him would be in somewhat the same position as a person of the present day shut out from the knowledge of extant music.

Further, in such circumstances as we are considering only the tradition connected with a particular kind of instrument could come down to the learner, and whatever promptings he might have, or whatever potentialities of musical conception might be in him, which could not be expressed or suggested by this kind of instrument, would be lost.

Through the myths which clothe the history of early Greece we see various communities thus isolated, some of them having leading or representative instruments of totally different characters. Music is unfolding at various points—each a separate, small, shut in, world of

effect. Progress, where there is progress, is one-sided. At the same time this independent working favours the development both of different instruments and different lines of effect.

Imagination now takes easily a leap into the future. We see men gathered in cities, and concourse taking place between musicians, from which we may conceive ensues a broadening of effect—an opening up of inspiration—as the legacies of the past relating to different peoples, countries and instruments become the heritage of every musician. Yet, as history shows, before all this came about, experiment, discovery and general progress spreading over more than two thousand years, had to be made.

To proceed with historic Greece, music as a definitely constituted art again confronts us, and with nearer, ampler, more vivid presence as it mingles with every phase of life. Yet though we stand closer to it, see more into the people's thoughts—almost catch the hum of their life; and notwithstanding, in addition to almost numberless representations of instruments in painting and sculpture, we have the specific teaching of their theorists, and allusions to the art by their and succeeding philosophers, the positive effects of their

music is lost to us almost as completely as in the case of the Egyptians and Assyrians.

Notwithstanding the lyre seems indigenous to Greece, and the origin of flute playing among the Greeks is lost in the mist of the past—one account fixing B.C. 850 as the period when the rules became fixed—Greek music as I have already intimated was strongly influenced by, if it was not altogether a definite continuation and development of, Egyptian. Lyre, flute, cithara, harp, lute, trumpet, cymbals (large and small), sistre and triangle, still persisted, but the three first mentioned were the instruments chiefly in vogue among the Greeks, and probably all but these, if not all without exception, were originally derived from Egypt or Assyria. An instrument called the magadi was also imported into Greece from Egypt; its strings being divided by a bridge at one third of their length, it yielded the effect of the octave—hence the expression, to magadise or play in octaves.

We have little definite knowledge of the details of these various instruments, but I may mention a few facts both general and incidental concerning them.

About B.C. 500, lyres had eight and nine strings; 50 years later, 11 and 12. In the "concourse of song"

only those of four were admitted. This seems an unmistakable sign of academic conservatism.

The cithara was a more complex and sonorous as well as a better constructed instrument than the lyre; it had seven, eight and sometimes more strings.

Flutes were in great variety. There was a double flute which demanded a great effort on the part of the blower who for this reason sometimes bound his cheeks in such a way as to be able to blow strongly without distorting his face; a grave flute which was used to accompany choruses of men; and a small flute giving forth a wailing or mournful quality of sound, which was used at funerals.

Flute-playing was an elaborate art and had a special name (aulody).

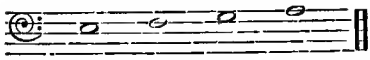
The great harp, a distinctly Asiatic importation, had as many as 35 strings.

The trumpet was employed by the Greeks less in war than in sacrifices; the latter use tends to associate itself in the mind with the fact that the Jews had a sacred trumpet which, as has been said, is still employed in the synagogue.

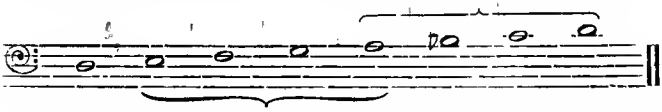
The various instruments of percussion were less

generally used by the Greeks than by the Egyptian and Asiatic peoples.

As to the Greek system, I have intimated that for investigating the subject of Greek music we have the advantage (or disadvantage), of their theoretical and philosophical treatises. Certainly if, as in the case of the Egyptians and Assyrians, we had been left with nothing but representations of instruments, matters would have been considerably simplified. Certain things however are clear. The system of the Greeks first took tangible form in the structure of their primitive instruments, and of these the four stringed lyre became the most prevalent. The system set forth by this instrument was a scale of four notes. The actual pitch and relation of these notes in the primitive lyres cannot be stated with any certainty—they probably differed in different places—but the arrangement of sounds which is considered to have become the nucleus of the Greek as it seems to have been that of the Egyptians and is of the modern system, is a semitone followed by two tones. The Dorian lyre is said to have been tuned in a way which may be represented approximately as follows;



The main subsequent development of this nucleus consisted of the superposing on its fourth note a similar series, with the addition below of the octave of the top-most note; which rendered the whole identical with the melodic form of our minor scale descending.*



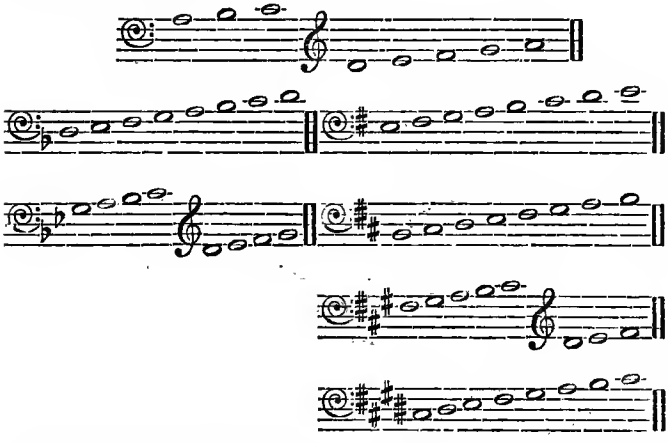
This and a similar scale based upon E, F-sharp, and G, together with transpositions of the three first of these four scales a fourth lower,† represent the develop-

* But the ratio of the vibrations in the case of all the tones was 8-9 and that of the two semitones, 243-256. Thus the tones between the 4th and 5th, and the 7th and 8th degrees, were slightly larger, and both semitones slightly smaller, than in our scale of A minor. To put the matter exactly, yet quite simply:—suppose the tones between the above mentioned degrees in our scale of A minor (the respective series of vibrations of which proceed in the ratio 9-10) were so modified that 81 vibrations took the place of 80, of the series answering to the upper notes these tones would become Pythagorean, involving the ratio 8-9 And suppose the two semitones of our scale (the respective series of vibrations of which proceed in the ratio 15-16) were so modified that 81 vibrations took the place of 80 of the series answering to the lower note, these semitones would become Pythagorean, involving the ratio 243-256.

† (The bases involving thus eight following degrees.)

ment which resulted in the seven scales which formed the Greek system.

These scales being a regular part of our system admit of being so arranged that, taking that on A as a centre, two (those on D and G) follow in the same order as our scales with flats, and the remainder, as our scales with sharps—that is to say in the case of each scale all the degrees but one coincide either in the unison or octave with those of the scales a fifth above and below as far as the extent of the system admits. Thus arranged, and expressed in our notation, they appear as follows:—*



* The reader will understand that my object in thus arranging the Greek scales is to show their relation to our system.

With the different stages of this extension the names of Terpander, Sappho c. B.C. 610 and Pythagoras, B.C. 580-500, are connected. As Terpander, who was a native of Lesbos the then centre of Greek civilization, is stated to have incorporated into his system certain scales which prevailed in other parts of Greece; and Pythagoras about the middle of the following century visited Egypt, where, as has been shown, a kind of diatonic scale existed; there is some reason for concluding that the actual source of the improvements associated with the names of these two theorists was the varied practice of different peoples. The discovery that the Egyptians were acquainted with the principle of our diatonic scale taken in connection with the fact that the Greeks regarded Egypt as the sacred land of art and science, has led to the assumption that the Greeks derived all their musical knowledge from the Egyptians. But the gradual manner in which the Greek system is said to have become formed suggests a spontaneous process, which, however, may have been helped by piecemeal importation from Egypt. Judging by ana-

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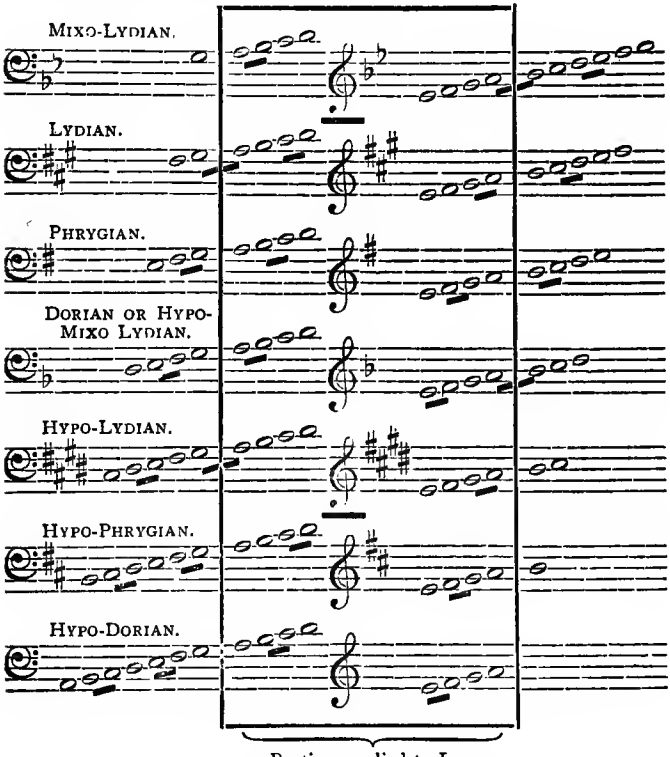
Whether the Greeks regarded these scales as forming a system, or simply used them as we use different transpositions of the same scale in singing unpremeditatedly at different pitches, is uncertain.

logy the probability is that the Greek scale was an assimilation of Greek and Egyptian elements—of which the larger portion was Egyptian.

As the lyre possessed as a rule but seven or eight strings the different transpositions of the scale demanded each a separate instrument, and as it was the rule for melodies to be confined to the medium notes of the voice the various instruments embraced the same compass.* According to Mr. R. C. Hope the first string of each lyre was tuned to A as represented by the top line of our bass staff, the remaining notes being those that would follow this A in the particular transposition which might be in question. Thus each lyre would have a different entablature and on the surface appear to embody a different mode. Hence much of the confusion which has attended the subject. At the same time it is not absolutely certain that the *melodies* given forth by these various transpositions were invariably based upon the kind of scale fundamental to them all—that is to say, that the same degree of this scale was in every transposition regarded as the key note. The scale fundamental to the different series of notes given forth by the various lyres answered, as I

* In this connection it may be mentioned that flutes also were constructed to give each a separate scale.

have said, to our scale of A minor. Now, as the reader knows, with the notes and degrees of this scale we can



Portion applied to Lyre.

The scales really begin on the lowest note to the left outside the vertical line and continue to the highest note on the right, but the portion only between the lines could be applied to the lyres. The voices were in every mode restricted within the limits of an octave.

produce effects belonging to the related major key, and that the Greeks did not sometimes do this on the lyre, harp or cithara, or with one of these instruments accompanying the voice, I think is extremely doubtful. The above diagram* illustrates clearly the origin of the seven Greek modes, as just described.

The reader will observe that the above scales are simply transpositions of the scale of A minor on its different degrees, only in lieu of the 3rd and 6th (C and F) C-sharp and F-sharp are taken as bases, the reason being that in the scales on C and F, the A comes flat and thus could not stand for the sound of the first string of the lyre, which according to the rule just referred to must sound A-natural. To extend the basal scale of A minor to two octaves, and transpose the above seven scales a fourth lower in order to bring the octaves embraced by the lyres into the middle of the voice, seem obvious enough things to do if thought desirable, but R. C. Hope speaks of them as the special work of Ptolemy (139 A.D.)

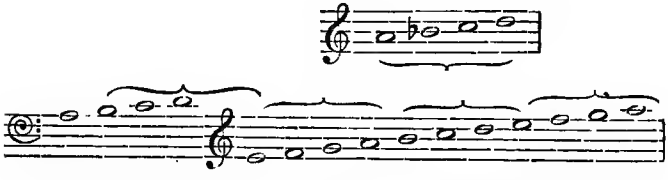
This was the state of things at the height of Greek civilization. We may regard the early systems of Ter-

* Taken from "Mediæval Music." By Robert Charles Hope.

pander and Sappho as representing certain primitive lyres or other instruments which gave forth the essential notes of the short and simple melodies of their time and place; and the fuller system of Pythagoras and its adjustment and extension by Ptolemy, as the selection, incorporation, and extension of previous systems; so that the scale ultimately resulting formed an abstract classification and digest of all the extant elements of effect of its period, just as our system does of all extant elements of effect of the present.

It is also uncertain, notwithstanding, as we have seen, this general system involved a short series of overlaid scales, whether the Greeks attempted to make that use of this important circumstance which we do when we extend a melody over more keys than one. The embodiment of each transposition by a separate instrument would seem to suggest that it was not the custom at this epoch to thus extend melody. Then there is the general impression that ancient Greek melodies were short. Helmholtz says that the melodies to Greek songs were at first comprised in a tetrachord as many melodies of the Roman liturgy still are, that later they embraced an octave, and that even to-day the popular songs of modern Greece involve a remarkably small compass.

At the same time it is to be remembered there are many traditions of instruments having more than eight strings, and that it is improbable that the feeling for modulation was manifested suddenly. However, in the third century B.C. the scale appears in Euclid (of Alexandria), as embracing two octaves with an optional tetrachord based upon the eighth note; it thus involves modulation into the scale a fifth below, which points clearly to the connected use of two scales thus related. The following is Helmholtz's example of this scale but expressed in modern notation and transposed an octave higher.



It is probable that we have here evidence of the way in which the departure came about to that system of overlapping scales on which subsequent development was destined so largely to hang.

In the meantime the ratios of vibration involved by the various degrees of the scale had been so adjusted as to coincide with the melodic form of our minor scale

descending; that is to say, between the fourth and fifth, and seventh and eighth degrees, counting upward, those ratios were changed from $\frac{9}{8}$ to $\frac{10}{9}$, and between the second and third, and fifth and sixth, they were fixed at $\frac{16}{15}$. Notwithstanding this great improvement was effected formally by Ptolemy (Fl. 139 A.D.) in simply changing the order of the relations of the tetrachord

si——ut——re——mi

$\frac{16}{15}$ $\frac{10}{9}$ $\frac{9}{8}$

(introduced by Didymus in the first century) to

si——ut——re——mi

$\frac{16}{15}$ $\frac{9}{8}$ $\frac{10}{9}$; and that

the former tetrachord is traceable to the discovery by Archytas in the fourth century B.C. of the true relation of the natural major third $\frac{5}{4}$, as given by the series of harmonics, (in contra-distinction to the sharper major third obtained by tuning by fifths and involving two Pythagorean tones); it rests at bottom upon æsthetic feeling. For this was the sanction of the adoption of the natural major third in all the above cases, and this and not

the harmonic scale, is its sanction in our system.* It is thus in harmony with the whole spirit of musical development that these improvements first appeared in the concrete forms of spontaneous effects—that they were recognized as conducing to beauty before their mathematical constitution was discovered, just as the ellipse was recognized and used as an element of beauty in form before its geometrical constitution was discovered.

That the Greeks not only possessed that feeling for the key-note which is a natural part of the musical susceptibility of modern European races, but that it was reflected as a cardinal principle in their system, are facts concerning which there is little room for doubt in view of the evidence of the following passages from Aristotle:—

"When we change the central sound (the *Mese*) having tuned the other strings, and play the instrument, why does all sound bad—all seem false, not only

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* It is not at all difficult to appreciate the difference of a comma $\frac{81}{80}$ in the performance of familiar airs in the different *timbres*, and all musicians in whose presence I have made the experiment have immediately recognised the difference.—HELMHOLTZ.

when we come to the central sound, but in every other part of the melody? If on the contrary we change the *Lichanos** or any other sound the difference produced is only felt in the case of these notes. Is there not a good reason for this? Because in all well written airs the *Mese* returns frequently; all good composers employ it frequently, and when they quit it they soon come back again to it, which is not the case to the same extent with regard to any other sound."

In another place he repeats the question to answer it more effectually:—

"Why when we alter the *Mese* do all the other strings seem false? When on the contrary, the *Mese* remaining the same, we change the sound of another string this only appears wrong. Is this the reason—that the justness of all the strings is nothing else but a certain relation with the *Mese* which gives the rank of each string in the whole? If we suppress that which serves as the foundation of correctness, that which serves as the general link, order seems no longer to exist at least to the same extent."

Nothing could be much clearer than this; and the

* The note touched by the index finger.

rôle of tonic could scarcely be better defined. But it is difficult for us to realize it applied to the Greek scale as formulated by modern experts. The note of this scale having the character of tonic is referred to by Aristotle as the *Mese* or central note. This according to Mr. R. C. Hope had two meanings. In the case of a single octave of the scale it referred to the sound which lay midway between the two steps of a semitone —at an exactly equal distance from each. In the case of two octaves it referred to the eighth degree. In each case it is the central note of the series. Thus of a single octave of the scale as represented by the melodic form of our scale of A minor descending, D would be the *Mese;* of two octaves, A, the eighth degree, would be the *Mese.* To us, only the latter note has anything of the character of a tonic. The actual scale referred to by Aristotle, as given by Helmholtz, is that portion of our melodic form of the scale of A minor descending, lying between E—E, the *Mese* being regarded by Helmoltz as A. This does not quite agree with Mr. Hope's rule which always brings out the *Mese* as the fourth note of the scale to which the series of notes involved belongs. Helmholtz leans to the opinion

that the Greeks set out from the *Mese* and terminated on the fourth below—which suggests our practice in recitative.

It is not easy for a modern musician to regard our minor scale, even with the 7th major, as answering to the scale alluded to in the passages above quoted. The principle of the key-note is not impressed vividly by the minor scale in every part; a subject moving in this scale demands often the use of harmony to remove ambiguity from the effect of some of the intervals. But the rôle of key-note in our major scale could scarcely be more distinctly suggested than it is in the above quoted passages.

Another remark of Aristotle is suggestive—that in which he says in effect, that opposed to the immediate near sound, the Parhypate (F), the Hypate (E) is sung without that effort of attention which the other notes demand. Here again a special and peculiar effect in our major scale is described—the effect of descending from the 4th to the 3rd. In the absence of definite and particular knowledge of the music to which Aristotle's remarks had reference it would be open for a modern to assume that the actual attunement and effect of the

system of sounds in question was virtually our major scale or portion of it.* On the other hand bearing in mind what some musical historians hold—namely, that our fundamental conceptions of musical beauty are peculiar to ourselves, *i.e.*, to certain modern European peoples, the suitableness of his remarks to our major scale might be regarded as a coincidence. Whatever may be the truth as to this matter I question the soundness of the doctrine to which I have just referred—that our fundamental conceptions of musical beauty are a partial psychological phenomenon—peculiar to particular races and to the modern era. The assumption of a radical difference in the musical instincts of

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* The following extract from Carl Engel's "The Music of the most Ancient Nations" may be regarded as having some bearing on the above remarks.

"Most national music is in major; of this I have had ample opportunity of convincing myself by carefully examining all accessible collections of tunes from every part of the world. The generally maintained opinion that the popular songs of a nation are usually in minor is altogether erroneous. There are but few nations possessing more songs and other melodies in minor than in major, while in the music of most nations the major key decidedly predominates. Nor is this surprising, since the major key appears to be the most natural of the two, to conclude from the principal harmonics which are softly emitted with any single tone, and which produce together the major chord."

different peoples has been also made too hastily in my opinion in another instance. Referring to the Greek enharmonic and chromatic scales the late G. A. Macfarren writing in the Encyclopædia Britannica gives the following examples:—

ENHARMONIC.								CHROMATIC.								
1	2	3	4	5	6	7	8	1	2	3		4	5	6		7	8
D	E	F		A	B♭		D	D	E	F	F♯		A	B♭	B♮		D

The reader will observe that in neither example are there the 4th and 7th degrees, concerning which omission Mr. Macfarren remarks:—

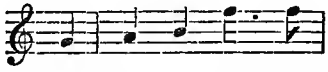
"In the harmonic scale of nature the 7th from the generator is too flat, and the 11th is too sharp for accepted use; the rejection of these two notes indicates a refinement of ear that shrank from the natural and equally refused the artificial intonation of these degrees of the scale. Mr. C. Engel proves the rejection of the 4th and 7th from the keynote by nations of high civilization in remote parts of the world."

I will grant for the sake of argument that because in the case of certain sounding bodies which give forth a rich musical sound the 7th and 11th partial sounds can by extremely delicate tests be proved to exist, it may therefore be assumed that the ear would realise

these two partial sounds* as clashing respectively with the 7th and 4th of a diatonic scale based on the generating sound. But in actual music the 4th and 7th of the scale are not always reached by a jump ascending from the 1st. Suppose when we do arrive say at F or B, by a leap from the C below, certain aural associations are disturbed, surely this would not be the case when, ascending, we arrive at B from G, or, very perceptibly, at F from G! The feeling of a fundamental note is a very abstruse thing. What is clear is that at any point of a melody a musician can (given time) summon up the key-note if he turns his attention to it. But one not a musician and who could not do this might realize and enjoy the same melody quite as keenly. But whatever may be the special influence of the key-note in the mind of a person listening to a melody it is surely going too far to assume that one so listening has a prevailing sense of its higher partial sounds—a sense so acute as for these ideal sounds to clash with the strong objective sounds of the melody. Further, we know that there are elements in sensation corresponding with partial sounds in the case of an objective sound, but do these

* Notwithstanding their higher pitch.

elements exist in the case of the *idea* of a sound? In the case of the opening of "When other lips" for instance:—



has the listener underlying ideas of an extreme B-flat and of a too sharp F—etheralised forms of some of the finer elements in the sensation due to the as yet unheard key-noe? And if he has, how is it that these ideas have a stronger influence than the palpable overtones of G, which note is actually sounded and with one of the overtones of which the B is in exact attunement?

An explanation certainly much closer to hand, of the omission of these degrees from the scales referred to, is that such degrees were not wanted—that these enharmonic and chromatic modes do not respectively represent a general foundation for multitudinous melodies, but the powers of an instrument devised probably for the production of some particular melodies. The fact that the chromatic mode in the example given by Macfarren embraces both the major and minor third, and the major and minor sixth, seems to support this solution of the problem. The absence of certain degrees in the formal pre-

sentation of a scale may also be due to a scholastic tendency to preserve a past form of development, in which case in actual practice the omissions are made good—as, for instance, they were, until recently, with regard to the approach to the last note in *recitative.* Where the evidence is a musical instrument instead of a scale the *lagune* might be due either to this conservative tendency or to backwardness in manufacture whilst in practice in this case also, it might be filled in by the voice. In fact musical instruments themselves as well as works on theory, are not only extremely vague indices to the actual art-effects they subserve but very insufficient evidence of the technical principles those effects may involve. Theory, it is true, is as a rule derived from practice, but practice is not always in advance of theory in the same line of movement, it may proceed in a different, and even an opposite direction.

With regard to the assumption that the elements of musical perception or the fundamental conceptions of musical beauty, differ with different peoples, I may add the following observation. Seeing we not only have no positive knowledge of the effect of the music of ancient peoples but can never be

certain that we grasp any past system in its actual application, when we meet among the musical traces of such peoples with anything peculiar, or that seems to contradict our elementary notions of propriety, it is more reasonable to conclude that the evidence is partial —the record imperfect, or the interpretation mistaken, than that there should have existed people having either on the one hand an inordinate, not to say impossible, fineness of ear, or on the other, an upside-down conception of musical beauty. Musical, like other art development, has been in the past, as it is in the present, fringed by outlying, ineffectual effort which here and there may assume a rude, imperfect, or even grotesque form. But this is not inconsistent with the doctrine that the sensibility which responds to modern music is deep and inherent in human nature though, with other qualities, it is no doubt through special causes subject to modification, deterioration and arrest. I therefore lean to the conclusion that notwithstanding this sensibility may have been—as in some countries it may still be—largely unappealed to, or appealed to in crude or abortive musical effort, it is, like reason, man's destined heritage, its germ being fundamental.

Whilst, however, there can be little doubt that the Greeks were far from devoid of that sentiment of tonality which lies at the root of our musical perception, it would be rash to conclude that the key-note played precisely the same rôle in their system that it does in ours. Most probably the feeling of the key-note was not so clear with them as it is with us. In fact it would be only in accordance with the principle of development that this feeling should have become articulate gradually—that its articulation should have been vague and ambiguous before it became precise.* Thus ancient Greek music may, as another passage in Aristotle suggests, have terminated on the note corresponding to our dominant (the Hypate, corresponding to E in our scale of A minor) as has been largely the custom in modern recitative. But if this may be regarded as evidence of a musical instinct of a slightly different character from ours, it is also open to us to regard it as part of the natural and historic growth of the latter instinct.

To return to our description of the Greek system, we see that the diatonic scale is unfolded and appears in seven keys. The departure is made toward modulation,

* Or, as is perhaps more probable, that its precise application should have extended gradually to more notes.

and the feeling for the key-note is becoming defined. To what point musical expression was carried in these circumstances—how deep and intense it may have been —we cannot say, but that the limitations in the system were the reflection of certain limitations in the form of the music, is in the natural order of things.

The subject of elaborateness of musical construction is vitally connected with that of notation. The more complex the former the greater need of simplicity in the latter. The simpler the former the less inconvenient is any imperfection which may exist in the latter. The Greeks appear to have possessed a complete but not a simple method of notation. It consisted of a system of signs taken from their alphabet, one series of letters indicating the sounds, another, their values, another, rests. In all, some one hundred and fifty signs were used. Further, the letters expressing instrumental music were rendered different from those that related to vocal. These various series of letter-signs were distinguished by the letters in each case being placed differently: thus in one case they would be placed upright, in another lengthways, in another upside down. Those placed upright referred, as a rule, to vocal music; those placed sideways, to instrumental.

How far the Greeks found this system of notation efficient we cannot say. Consistently with a remark just made, its elaborateness may point to simplicity in the music to which it relates. That the development of our system of notation has been a factor of which the importance can scarcely be exaggerated in the attainment by musical art of its present stature, I shall shortly attempt to show. Before, however, man's ingenuity and the play of coincidence, between them, gave rise to this system in completeness nearly two thousand years from the period of Aristoxenes (B.C. 320), the expounder of the Greek system, had to elapse.

Until recently only three examples of ancient Greek music had come down to us. These with their musical notation were first published by Vincenzo Galileo, the father of the astronomer, at Florence in 1581, having been taken from a MS. in the Library of Cardinal St. Angelo at Rome. They are a hymn to the muse, Calliope (attributed to Dionysius), another to Helios, and another to Nemesis (the latter two being attributed to Mesodemes). All are supposed to date from the first half of the second century A.D.

It may be here added that Kircher published in his Musurgia in 1650 the music to an ode of Pindar which

he states he discovered in a very ancient MS. of Pindar's works, in the Library of the monastery of St. Saviour, near Messina. The ode was written to celebrate a victory gained by Hieron, Tyrant of Syracuse, at the Pythian games, 474 B.C.

Whereas in all the above cases the evidence consists of MSS. which are assumed to be correct copies of certain supposed originals, in the two following cases it consists of the originals themselves.

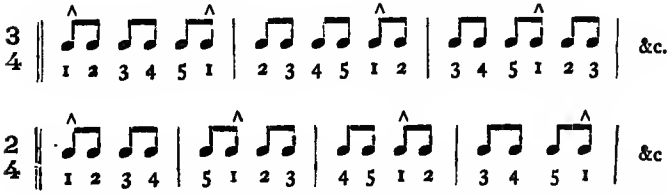
The first is, the discovery in 1882 at Tralles near Ephesus of a small marble pillar with music and words engraved upon it. The words are a kind of elegy referring to the shortness of life. The date is supposed to be about 100 A.D.

The second is the discovery at Delphi in May, 1893, by the French Archæological School of Athens, of a Hymn to Apollo engraved on marble, of which the date is supposed to be about B.C. 279 or 278. It is considered to have been written to celebrate the victory of the Phocians over Brennus the Gaul. The slab is in several pieces, and the text in certain places not continuous.

I confine my attention to the last case as the more important of the two. The great question is, can we depend upon the modern interpretation of the music?

Experts are not unanimous in replying distinctly in the affirmative though some are confident in doing so. Assuming that the notes are interpreted correctly as to pitch there remains the question of rhythm. Concerning this I have the impression—speaking as one out of the circle of the initiated—that we have not the whole secret. Mr. W. H. Wing whom I heard sing this Hymn at the Queen's Hall, was extremely careful to observe the $\frac{5}{4}$ measure, with the result to me that there seemed no definite measure, but only a halting and desultory accent. Strictly speaking there can be no such thing as a $\frac{5}{4}$ measure or any other measure of five. Only by arranging the five notes to two beats, that is by three being considered a triplet, in which circumstances the time is really duple, can *the first of each series of five* become accented. If the five notes be given evenly the simplest accentuation that can be applied to them is that in which the accent occurs on *every other note*, and on this system the first note of the second series of five would be unaccented. This would also be the case if the accent occurred after every three or every four notes. By some occult law of our nature no other odd number than three can be the unit of a system of regular accentuation. If we attempt to make five or seven such a

unit, in the one case a sixth, in the other an eighth pulsation is *understood* before the accent can recur. It is possible to have a rhythm in which the first pulsation of each five is accented, when it is dominated by one of the natural orders of accentuation, as indicated in musical notation in the two following examples:—



Though the principle of musical time enters largely into poetic rhythm the latter in its wholeness is a different thing. The rhythmical faculties of the musician and the poet respectively, though partly alike, are yet different faculties. In the case of poetry a principle of music leavens another order of effect, viz., language, which it is a mistake to regard as a purely practical form of demonstrativeness, for, as we know, language may not only become pure art, as in poetry, but into the ordinary use of language the artistic impulse may largely enter. And as this art impulse is of as special and distinct a character when operating in language as

when operating in music or painting, so in language it works through a faculty as unique as in the case of the two above mentioned arts. Thus notwithstanding there is much in common between musical rhythm and poetic rhythm they are in their respective wholenesses different things and moved by different faculties. Thus it is that some of the finest examples of poetic rhythm are the work of poets who had little of the special musical sense. In such cases the leaven of *musical* time is rather less than it usually is in poetry, the accent irregular, but somehow in consequence the general effect fresher and richer. The following examples in which this freedom may be observed occur to me:—Shakespeare's lyrics, "Come unto these yellow sands," and "I know a bank"; Milton's "Hymn on the Nativity" and Wordsworth's "Intimations of Immortality." It is also exemplified frequently in Scott's "Lay of the Last Minstrel" and Byron's "Siege of Corinth" and "Parasina." In more recent poets it becomes still more conspicuous, but its effect is often impaired by being accompanied by obscurity of idea and diffuseness of expression. Fine instances of its use exist in Tennyson and Swinburne, though in

some cases in these poets it degenerates to fancifulness and affectation.

These remarks may lend countenance to the suggestion that some confusion may have arisen through interpreting the musical by the poetic accent in the Greek hymn under notice. The following supposition may be regarded as an illustration of a similar possibility, though it represents an extreme case. Suppose Byron had written music to the opening lines of "The Corsair" in a kind of notation like the Greek, and that the musical accentuation to the first line,

"O'er the glad waters of the dark blue sea."

involved the rhythm which its recitation suggests, *i.e.*, a triple rhythm. Suppose further this music and its system to have become as obsolete as Greek music is now, and that an expert attempted to interpret the music of this first line. He might say naturally enough "There is no doubt whatever about the metre of this poem. It is heroic or deca-syllabic, and it is well known that in this metre each line consists of five feet, and that each foot embraces as a rule two syllables the first of which is accented, the second unaccented; and, that also as a rule, the five feet coincide with the syllables

thus:—four feet, with eight syllables beginning with the second, whilst the first syllable, which is unaccented, and the last, which is accented, make up the fifth foot as in the following line,

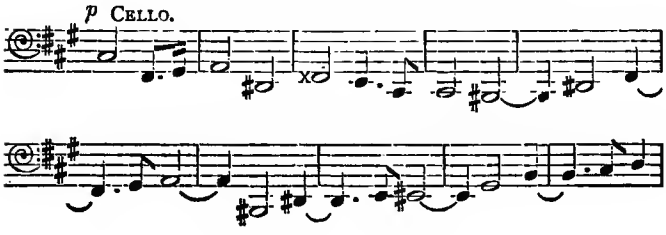
"Our thoughts as boundless and our souls as free."

The reader can form an idea how near to the true musical accentuation *of the line first quoted* an interpretation of it based upon these rules would be.

As I have intimated, I have heard the Greek hymn in question sung, and though it may be assumed that owing to faultiness in the record and deficiency of knowledge, the interpretation was far from correct, I have the impression that it still conveyed something of the spirit and effect of ancient Greek music. It also tended to confirm me in an idea I have, namely, that much that gives the historic Italian school its general elevation of style is an inheritance and assimilation of phases of old Greek spirit and form. Nobility of phrase and an august spirit seem transmitted from the far past in the effect of this hymn even as we interpret it.

Certain contingent circumstances may have had something to do with the actual effect of Greek music. Assuming that the Greeks did not employ harmony

(though, as they inherited ultimately the instruments and musical culture of Asia, the probability is overwhelming that they did) it seems not improbable that the amplitude and richness of effect produced by voices (particularly male) of fine *timbre*, went far to supply its place. The possibility suggests itself in this connection that the Greeks may have cultivated a species of melody or homophonal effect which has been much neglected since the evolution of harmony. I refer to a style of melody in which special character is aimed at rather than spontaneous charm, a style which, with a certain peculiar propriety, involves occasional chromatic intervals, and departs from absolute symmetry of form. It thus would demand peculiar nicety of ear and of vocal inflection—qualities which the Greeks possessed probably in perfection. The following example from "Lohengrin" may be an approach to the effect in question:



There is not only a certain completeness in this kind of effect, without harmony, but generally it is better without it.

There is little of a special character to be said concerning the position of music with the Greeks. The most suggestive fact is, that it figured generally not as an independent art but as an element, and not the leading element, in a composite art—poetry, music and dancing, being all embraced by the term, *music*, whilst sometimes in an ode and even a drama they would all three be the work of a single person. That music entered into the religious ceremonies and public formalities of the Greeks as well as into their indoor and out-of-door recreation, is well known. To enumerate these various occasions and animadvert upon the greatness of some of them, would be no doubt to present the art as occupying on such occasions an imposing position. But occasions however grand to which music was accessory in a way that does not come home to us, are from the point of view of my present purpose less interesting than the simplest and humblest circumstance that tends to suggest the individual character of the music connected with it. The fact that young girls and children walked in procession to school

to the sound of the flute is such an incident. Here we can form some idea of the actual effect; we know it must have been rhythmic according to our conception of rhythm; we feel it must have been tuneful, or it would not have been played to young girls and children.

The principal association of Greek music in the modern mind is Greek drama. Yet notwithstanding this subject has engaged the attention of many learned investigators few if any have succeeded in conveying a clear idea of its effect. The poetic—the moral and philosophic ideas—in fact all the literary elements—are no doubt understood thoroughly, but their dramatic presentation in the actual circumstances—the large theatre, open to the sky, the masked actors, the sensitive, mobile, many-sided, yet formal and mysterious chorus, and the music of lyres, flutes and citharas—we find it difficult if not impossible to realise. One portion—perhaps it was a considerable portion—of the musical effect we can perhaps form some idea of—that connected with the chorus. This would comprise vocal phrases as well as a suitable accompaniment to dancing and walking in procession. The vocal phrases or their accompaniment would probably sometimes possess

local colour. The chorus of sea-nymphs in "Prometheus" and of the Furies in the "Eumenides" present opportunities for this. As regards the processional music we can conceive its general form, and the same may be said of the music to the dances though here we must guard against the modern association. A writer in the "Edinburgh Review" some half century back refers to a tradition that vestiges of the ancient dancing as well as the ancient music were then still to be found in the East and in some parts of the kingdom of Naples. Probably poetic declamation and the accompaniment to march and dance—as in the processional odes—often conspired to produce a certain unique effect in which the dancing was partly pantomimic—a poetry of gesture which aided the expression very effectively. To return to the vocal phrases of the chorus—we can also to some extent imagine their effect as they broke in upon, or joined in, the monologue or dialogue. Considering that the primitive chorus was a congregation of people at a village festival marching round the altar of their deity singing hymns, and that in the subsequent drama the altar still figured standing in the middle of the orchestra, it seems probable that the choral music of Greek drama would always retain

a religious spirit. Concerning, then, some of the music connected with the chorus we can conceive certain qualities that it must have had—qualities fundamental to the circumstances—a certain necessary form when it was a march or dance, and certain fundamental accents of awe or festal feeling which have been always recognised by humanity generally. Our ideas, then, of this music need not be altogether colourless. We feel that it had much freedom and variety of character and beat with the pulse of life.

As to the musical declamation by a single voice, it seems impossible for a modern to conceive the effect of this from the dramatic standpoint. Helmholtz remarks that vestiges of it might be found in the melopœia of Italian reciters, and the chanting of Roman priests. One effect of this recitative we can imagine, namely, that of rendering the language audible—of carrying it about the vast space. Possibly aided by subtle play of gesture either in the speaker or reflected by the chorus, this declamation from the point of view of the religious drama, might have been very effective, the movement and comment of the chorus contributing that fulness and flexibility of expression—that world

of life—which the orchestral accompaniment gives to recitative in Wagnerian drama.

Incidentally I may here add that in the tragedies of Æschylus the chorus alone represented the musical element; that with Sophocles musical instruments and the dance took part in the dramas; but that the tragedies of Euripides were altogether musical.

The period of Greek music is regarded as commencing about the beginning of the eighth century B.C. Its apogee is supposed to have been soon after 500 B.C. The stage of development involved in Aristotle's allusions to the art would be that attained not long subsequent to this. Influenced largely by the art in Egypt and Asia it, at this time, resounded not only throughout Greece but back to Egypt, and from the Asiatic isles to Italy and even the coast of Barbary.

Towards the approach of the Christian era Greek music begins to be lost to the historian as a national art and to become dissipated amid that vast changing of the old order and beginning of the new, the Roman empire. A period of innovation—of decadence the purists considered it, certainly of great activity—seems about B.C. 450 (when Aristotle would be approaching middle age) to have set in; and in this movement flute-

playing (both solo and concerted), and cithara playing, figured conspicuously. These two instruments constituted the orchestra so far as instrumental music was concerned when music as an element of Greek Drama had risen to its highest importance. This would include the period of Euripides and Sophocles, whose lives, largely contemporaneous, extended through the greater part of the fifth century B.C. Later on, when the Dionysian artists (really strolling players) exploited the Grecian comedy in the provinces they took with them a flautist and cithara player. The law of change and development and the no less inevitable tendency of one civilization to act upon another—which influences were no doubt operating definitely in the musical art of the Greeks at this period—were destined about the middle of the fourth century to receive a strong impetus from the expeditions of Alexander the Great, for with the introduction of Asiatic luxury thus occasioned came greater knowledge and use of Asiatic instruments. At this period the great Harp, to which I have already referred, is in evidence. Most probably also the Tambourah (or some development of it in the Guitar and Lute tribe of instruments), entered Greece at this time, if it had not done so before.

In considering the general effect upon Greek music of all the activity above referred to, it is to be remembered that the, so to speak, classical instruments with the Greeks—the instruments with which their patriotic feelings were more particularly associated—remained the Lyre and Cithara. The Persian wars had left with the pure Greeks a horror of anything Asiatic—anything that raised the remembrance of the heathen enemy. At the same time the effect of that activity upon the musical art of this period, though that art may have ceased to represent the national art of the Greeks, must have been very great. That the flautists, if not the players upon those instruments of the lute tribe to which I have just referred as likely to have been imported at this time, to some extent modulated, on the one hand, and on the other, introduced what we should call chromatic effect, seems certain. Some effects involving modulation were no doubt, portion of the musical tradition that descended to the Greeks from the Egyptians, who, as we have seen, in the Tamboura, had free access to various scales, and in the Flute, access into more than one, whilst their great Harp of 35 strings suggests that some provision for modulating existed in that instrument. In contemplating the representations of instru-

ments left by the Greeks on monuments, vases; in pictures and sculpture; the most striking thing is the negative fact, that there is no instrument that appears so suggestive of modulation as the Tamboura of the Egyptians and Assyrians. For the types of all the instruments in these representations may be reduced to two: the flute-type and lyre-type—the latter would, of course, be involved by the Cithara and Harp.

The appearance of the Tamboura in Egyptian and Assyrian representations is such a salient fact from the point of view of musical development—this seeming the one instrument of the highest antiquity* by which on a few strings by means of a finger-board not only a greater number of notes than were attainable on the largest Harp could be produced, but every kind of interval—that I give over page a representation of it.

Yet notwithstanding among the instruments of the Greeks there may not appear any on the surface so suggestive of modulation as the Tamboura, or even the

* It occurs in Egyptian representations of concerts of the eighteenth dynasty which dates, according to Sir Gardner Wilkinson, from B.C. 1575 to 1289; and in hieroglyphs at least 600 years earlier. See "An Introduction to the Study of the Egyptian Hieroglyphs," by Samuel Birch, London, 1857, p. 225.

FIG. 8. TAMBOURA OR EGYPTIAN LUTE.
(NECROPOLIS OF THEBES.)

great Harp, this people may in practice in their use of Flute and Cithara—and more particularly in their use of either in connection with the human voice—have developed largely whatever knowledge of modulation may have come down to them. So also it seems probable they would have further developed that knowledge of harmony and accompaniment which we saw reason to assume the Egyptians and Assyrians possessed. That they must have been familiar with the abstract effect of harmony is evident from Euclid's definition of

the difference between a consonance and a dissonance: "The consonance is the association of two sounds, one acute, the other grave. The dissonance on the contrary is the inaptitude of two sounds to become associated without producing a hard impression upon the ear."

To return to modulation—whatever the respective shares of Egyptian, Assyrian or Greek, may have been in the achievement—that in the third century B.C., the point of departure to modulation had been found and passed, the fact of the system of Euclid, to which I have already called attention, definitely attests. In this system, as I have pointed out, we find a scale and a transposition of it so related that an essential portion of one is identical with an essential portion of the other, the particular relation in this case being the same as that between a certain scale and the scale of its subdominant, in our system. Thus we have here virtually (notwithstanding the scale in the system of Euclid is a minor scale), the initiation of our present system of twelve major and twelve minor scales.

Now the difference in the extent of development between this principle of overlapping or enwoven scales in the case of the system of Euclid, and our system,

lies at the root of the difference so far as fulness of form is concerned, between ancient Greek and modern music; the lagune between the two extents of development may, in fact, be said to represent the creation, the experiment, the practise—in fact, the whole musical progress—between the close of the period of Greek music and some two thousand years later when the modern system became completed. This will be seen more clearly in the light of the following analysis of our system:

First, we have twelve major scales so related that each sound of any one scale may function as an essential note of seven of those scales, whilst the sound a semitone distant from it, up or down, may function as an essential note of the remaining five. For instance, take the notes E and F, as being a semitone apart, the following diagram shows (1) the scales of which they are respectively essential notes. Thus:

E is the			F is the		
1st degree of		E	1st degree of		F
7th	„	F	7th	„	G♭
6th	„	G	6th	„	A♭
5th	„	A	5th	„	B♭
4th	„	B	4th	„	C
3rd	„	C	3rd	„	D♭
2nd	„	D	2nd	„	E♭

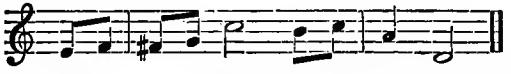
And (2), that whichever list of scales we take, whether that under E or that under F, the five scales necessary to complete the series of twelve are contained in the other list.

In the above example the step of a semitone corresponds to one of the diatonic semitones of the scale of C. Now this particular case further illustrates that four degrees of every major scale—the 3rd, 4th, 7th and 8th, as well as (in common with the other degrees), being respectively available as essential notes of seven scales, may lead by the step of a semitone to a note capable of becoming an essential note of the complementary five *without that step involving a departure from the sounds of the original scale.*

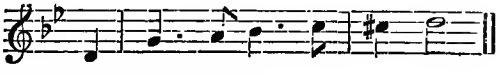
Thus we see that in any major scale the sounds involved in the two diatonic semitones, *between them* thread the whole system, as do all the other sounds of such scale in conjunction in each case with the chromatic semitone above or below.

A still further order of variety arises out of the foregoing enweavement of scales. Each note of a scale is *hedged in* by a note a semitone distant above and below. Now as well as these bordering notes being capable as we have seen, of becoming *essential notes* of

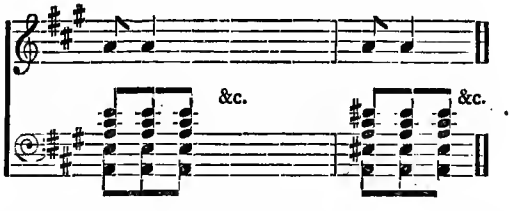
other scales they may be treated as *chromatic alterations* of the notes of the scale on which they abut, both in melody and harmony, and far more than mere ornamentation and increased piquancy or even increased intensity of expression is involved in the additional power thus given to the scale. For instance, in the following strain the chromatic effect gives all the beauty to the opening part



whilst in the following, it is fundamental to its expression.



So, in harmony; as thus:



Thus through our system of overlapping scales each scale has not only liens permitting more or less im-

mediate modulation with the eleven other scales but possesses, so to speak, a borderland where a world of new effect may be touched upon *without the old key being left.*

Now I have referred to the lagune between our system and that of Euclid, as standing for the working of the musical impulse during the two thousand years following the Greek development amid all the varied phases of life—the strenuous activities, the strife, the mingling of peoples, and epoch-making events, that occurred in that interval. I thus imply that the modern system as just described is (as was that of Euclid) virtually the result of practical musical activity the inspiration and main guide of which was æsthetic feeling. It may be truly said that the simple knowledge of musical sounds or of any system into which they may be formed could only be a general and distant cause of such a system as ours. The Greeks as we have seen, knew of the diatonic scale; they also knew of the chromatic scale, and of various combinations of both. Further, Aristoxenes (pupil of Aristotle), arrived at dividing the octave into twelve semitones by proceeding by fifths and neglecting the slightly too great sharpness of the ultimate sound. Here were, so to speak,

all the raw materials of our system. But neither this nor any further knowledge or analysis, classification or arrangement of its elements (that is to say: no action of mere theorists), could have put it together. Nothing could have done so but æsthetic feeling prompting practical musical activity, aided by the play of circumstance. This explains the vast stretch of time involved in the development of the modern system, as, in fact, it does (as I said in the introduction to this work) that involved in the whole development of musical art. One of the essential differences between music and the other arts (excepting architecture), is that whereas in them—say in painting and sculpture—the elements of the form are already extant in nature, in music those elements,—that is, the constituent phrases,—are themselves creations due in the first instance to æsthetic prompting. Thus they can only increase through successive outflows of that prompting in the ordinary course of art activity the progress of which depends upon circumstance and time. I have said that the abstract fact of harmony must have been known to the ancient world,—as also it is virtually certain were some of its applications in accompaniment and perhaps concerted effect,—but, as we shall see as we proceed, a special pre-

paration of circumstance had to form for the conditions to come about that were destined to lead to its modern development. So (to allude again to this), though Aristoxenes in dividing the octave into twelve semitones treated the ultimate note in the operation as a true octave of the beginning note, it was æsthetic prompting working in the formation and use of our system of related scales, that sanctioned that proceeding.

These considerations reveal the need of all the effort and play of circumstance that filled up the interval of musical history between the period of the system of Euclid and the beginning of the modern period when our tonal system was completed. Thus we see how impossible it was for the ancient Greeks to produce musical art approaching ours in fulness of form, and how largely different from ours its effect must have consequently been. Moreover, that certain phases of melodic expression with which we are familiar were absent in all ancient music seems to follow from the consideration that modern melody has been influenced profoundly by the development of harmony—first generally, by this having tended so greatly to strengthen the feeling of the keynote, and secondly, by the special æsthetic effect of cer-

tain modern harmonic progressions—they having, so to speak, *induced* melody to develop along certain lines.

As we know, in the Greek period, music in its more serious efforts never became an independent art; but that it arrived at beauty in song, dance and march—with accent, expression, fulness and strenuousness of effect—we cannot doubt. Although within this period the conditions were not ripe for it to be more than an accessory to poetry and movement yet the foundations of the modern art were definitely laid—our diatonic scale was unfolded; the sense of the keynote had become more or less clear; our system of overlapping scales had begun to be formed; and development in the direction of modulation begun.

CHAPTER VI.

Roman Music.

THE path of development in musical history passes from Greece to Rome. Not because the Roman mind supplied any new links that were vital to that development but because it kept the art in large evidence until the time arrived for circumstance in one of its often unobtrusive ways to influence it.

As to the general history of music with the Romans not much need be said here. It is first come upon in connection with the religious ceremonies of a laborious yet martial people whose priests performed their sacrifices to the sounds of the flute and double flute. Located about the middle of the Italian peninsula they had been influenced by the Asiatic musical tradition through the Etruscans to the north, whence came their knowledge of the above mentioned instruments. In all

their public eulogies of great men it was the flute that accompanied the traditional songs, as it was the sounds of the flute (small and large) that helped to voice the weeping of young girls and women in their funeral lamentations.

As the peninsula to the south was occupied by the more refined of the Greeks it was natural that the Romans should have been influenced by these musically as in other ways; so that when subsequently they vanquished them they soon assimilated their music and the use of their instruments.

I referred in the previous chapter to the Dionysian artists who took the Greek tragedies and comedies about the then civilised world and had among them a flute and a cithara player. In the year B.C. 167 these players appeared for the first time in Rome. They had been summoned (in order to celebrate his triumph) by Anicius who had gloriously terminated the war with Illyria (the provinces south and west of the Danube) by the conquest of the nation and the captivity of its king.

As the nation grew, and musical instruments of various kinds poured into Rome from Greece, Asia, Africa and even barbarous countries, the flute remained the

instrument essentially Roman, the trumpet, which was the Roman instrument of war, and also regarded as a sacred instrument—coming next.

Ultimately as regards music the Romans were so *Hélenised* that it became fashionable with them to sing in the Greek language to the accompaniment of lyre and cithara, whilst the more celebrated teachers throughout the empire were generally Greeks.

The general development of the art with the Romans was thus the same as it was with the Greeks, but it was applied somewhat differently. The Romans being a people accustomed to worldly triumph and display drew upon it mainly for its more imposing effects. Under the emperors brilliant displays of this description took place in both public and private concerts. Seneca, in describing a concert, refers to the accents of women mingling with the voices of men, to flutes joining in the chorus, and to the sounds of wind and other instruments being opposed in such a way as to produce a most agreeable combination.

It was as theorists rather than as practical musicians that the Romans left their mark on musical development. One of the most celebrated of these was the architect Vitruvius in whose writings is found an early

reference to the organ the first mention of which occurs in a description of it by Hero (Fl. 3rd century, B.C.), who made some improvements in the instrument as left by his father Ctestibus, the Greek physicist popularly regarded as its inventor and who if we consider the principle of the organ to be a combination of pipes sounded by mechanical means probably was so. I shall shortly make some further remarks on this important instrument; the above referred to allusion to it, however, in its infant stage—stands out amid the somewhat pointless state of things with regard to musical development which under the Roman régime I have been describing. Another fact coming under that régime and having somewhat particular interest is the following. Towards the year B.C. 30 there came to Rome from Egypt, a form of dramatic entertainment which spreading quickly gave a great impulse to musical art in its more varied application. This was the Greek-oriental pantomime, tragic and comic, in which music was a very important factor, the dancers in it being accompanied by large and brilliant orchestras. This form of dramatic representation gradually replaced the ancient theatre.

Thus resounding throughout the Roman empire in accents and inflexions, new and old; systematised; voiced by flute, lute, lyre, harp and the human choir; in form infinitely varied within the limit of its development; speaking of every feeling, and pulsing with the abounding life; music that has been expanding from the prime, and whilst broadening in form strengthening in unity, passes into the Christian period.

PART II.

THE CHRISTIAN PERIOD.

CHAPTER VII.

THE CONTINUITY OF THE ART DURING THE EARLY CENTURIES OF THE CHRISTIAN ERA.

THE reader is of course familiar with Milton's "Hymn on the Nativity," and consequently with the following beautiful lines: —

> "The winds with wonder whist
> Smoothly the waters kissed
> Whispering new joys to the mild ocean.
>
> * * * *
>
> The stars with deep amaze
> Stand fixed in earnest gaze
> Bending one way their precious influence."

Yet notwithstanding; when the hour struck that decided the commencement of our era no unwonted mystic thrill pervaded the human consciousness but the moments flowed as before and after. So, under the Roman régime, life in its mingled character and

strenuous activity passed from one epoch to the other without break, pause or any kind of intermission. And so we can have no doubt that at the beginning of the first century of our era music resounded on the surface of life and moved man much as I have endeavoured to indicate it did at the close of the last chapter. What change it might have unfolded—how long a time would have passed before a new departure came about in the absence of that to which I am going to refer, we can have no idea of. But, as I have hinted, special circumstance in seeming obscure and unimportant guise was imminent—was destined to touch music with its fateful finger (fateful in creating as in destroying) —and to decide the time and largely the character of the art's ulterior development. While the empire shone in all its splendour, and Rome re-echoed with strains gay, gracious or triumphant from voice and instrument, beneath, in the underground chambers of the catacombs, or in secluded country places, the proscribed Christians prayed, and sang their heart-felt hymns.

Readers of musical history are familiar with the assumption that the songs of the early Christian church were the germs from which modern music developed. If this assumption were the truth it would

ST. CECILIA.

From an Engraving of the Picture painted by Guido Reni.
(Born at Calvenzano, Bologna, 1575, died 1642.)

Facing page 144.

follow that those songs constituted the definite legacy which ancient music bequeathed to modern.

Now the progress I have thus far made in impressing the fact of the general continuity of musical art, will probably have prepared the reader for my stating that the above inference represents far from the whole truth of this matter. As we proceed, whilst pointing out the epoch-making importance upon the art of that study and systematic cultivation which the above songs initiated, I shall bring forward some evidence to show that they did not by far constitute the whole contribution of ancient to modern music.

How the early Christians came by these songs, what the words were, and the actual effect of the music, we do not know. To speak of the music, which is that which mainly concerns us, was this Jewish, Greek, or gathered from melody floating in the air? There are certain facts which lend far from weak support to the idea that some of the chants in question belonged to the style and system of Hebrew music. The first Christians were virtually a sect of the Jews, and the first fifteen bishops of Jerusalem were all circumcised Jews. Some reasons may also be given bearing against the suggestion that Greek religious hymns mingled in the early

Christian songs. If Gibbon is a reliable guide there was a strong repugnance on the part of the early Christians to Greek music, as witness the following passages:—

"Every art and every trade that was in the least concerned in the framing and adorning of idols was polluted by the stain of idolatry * * * Even the arts of music and painting, of eloquence and poetry, flowed from the same impure origin." Further, that spirit of asceticism which animated the members of the early Christian church probably also operated as a preventive of its adopting the music found without, as witness the following passages from the same writer:—

"The unfeeling candidate for heaven was instructed to resist not only the grosser allurements of the taste or smell but even to shut his ears against the profane harmony of sounds." * * * "In the censures of luxury the fathers are extremely minute and circumstantial; and among the various articles which excite their pious indignation we may enumerate false hair, garments of any colour except white, instruments of music."

It is thought that chanting antiphonally was one of the forms which this music assumed, from the well-known letter of the younger Pliny to the Emperor

Trajan (about A.D. 110), to the effect that the Christians were in the habit of assembling before sunrise and chanting a hymn to Christ as God "by turns among themselves." This would seem to suggest the influence of the Temple.

Music during the earlier centuries of our era is generally regarded by the historian not as simply veiled by the penumbra of antiquity but as lost in total darkness. As regards details the latter may be the case; but as regards certain general facts we know something. As I have said we may assume that popular art did not cease at the rise of Christianity—that as other sides of life persisted so did the musical—that as the mother still sang to her child, and peasant, mariner and artisan, still threw off their snatches of melody or trolled their roundelays, so musician and dilettante neither ceased from the land nor contented themselves with religious melodies. But besides knowing these general facts we can draw some particular conclusions from our recent study of antiquity. We have seen that through some inherent relation between man and music the art is not only continuous but pursues a particular path of development.

That the cultivation of Greco-Latin music continued long into the Christian period is evidenced by the fact that about A.D. 500 Clovis, King of the Franks, applied to Theodoric, King of the Ostrogoths, for a Greek Cithara; and that at most three centuries later sacred and popular art, whatever the actual effect of each may have been, were then, as they are now, one language, is implied by the story of a Lombardian Jongleur pleasing Charlemagne (who took a particular interest in church music) by one day singing to him an original composition. The following story points also to the latter conclusion.

Adhelm, Bishop of Sherbournes (9th century) upon entering his church one day, found it empty. Undisconcerted, he procured a Harp, stationed himself outside, on the near bridge, and began to sing; then when a crowd had collected he proceeded to preach. It might be naturally supposed that the sacred and secular music of this period involved (as the two styles in the known portion of the art's history are seen to involve) the same fundamental principles of form. Still it has been so much the custom to regard the art as having begun *de novo* in the early Christian church, with only certain simple chants as a foundation, that the picture

of the Bishop singing to his harp and drawing a crowd of listeners in the public thoroughfare seems to possess a novel suggestiveness—bringing home to us that the music of the Church must have contained a popular note. Even regarded only as traditions the above stories are evidence that the oneness of musical effect which they imply was considered a natural state of things.

That the effect of sacred music about the period of the 8th century was confined to that understood as belonging to the early Christian chants is questionable. In the first place these chants, so far as our knowledge of them is concerned, are incomplete and consequently lifeless. L. A. Bourgault Ducoudray speaks of them thus*: "these (melodies of plain-song) divested to-day of their rhythm and primitive character, resemble mummies if we compare them with the living melodies of the East." In the second place the application of music to religious worship was, then, as it is always, subject to certain conditions, and affected by particular circumstances. The reader will remember that the Greek modes as finally settled by Ptolemy

* In preface to "Mélodies Populaires de Grèce et d'Orient."

were based upon the scale of A minor (with the large and small whole tones related as at present). They, were in fact, simply the scale of A minor, extended to two octaves, with its transpositions on the succeeding seven degrees. Now Robert Charles Hope, who, as we know, has made a special study of mediæval music, considers that these are the true Greek and real mediæval modes, and that the form and use of the octave-scales in the Church in mediæval times were due to the limited compass of the organs used in the Church at this period, which compass allowed part only of a mode to be played upon them, and that out of these circumstances what are called the ecclesiastical modes arose—that part or particular octave of the general system which was adopted (perhaps because it was embraced by particular chants) getting to be regarded as an independent scale. Thus, referring to the introduction of the Organ into the West in the 7th century, with its limitation of notes, he says:—"A part only of a mode could be accompanied or played upon it, and this part, or octave scale, gradually came to be looked upon as a complete mode, instead of being but a portion of one; and the chants written in these octave scales with their restricted compass, and the

positions of their semitones varying in each, in course of time, were known as the 'plain song' chants of the Church, and eventually were thought to possess some sacred import."

The following remarks of Mr. Hope are also interesting in this connection:—

"The earliest compilation of 'Plainsong' of which there is any record is of the latter half of the eighth century, and to this period also is assigned the first mention of the scales in the form in which the 'Plainsong' is written; and, further, that it was at this time the modes were cast into that form in which we know them.

"There is not a tittle of evidence, nor a shred of information of any kind which even suggests that any alteration was intentionally made in the form or arrangement of the scale as finally settled by Ptolemy in the second century. The use of the Organ as an accompaniment to the singing in its primitive form must have compelled the arranging of the vocal music in such a manner that it should conform to the exigences of the instrument." * * *

"If the mediæval system of music was not the direct outcome of the necessarily restricted compass of the

primitive organ, we must fall back on the only other feasible theory, viz., that the portions of the Greek modes applied to the octave lyres were adopted, with their semitones occurring in different positions in each series of octaves."

This latter theory is easily conceivable. As the octave lyres of the Greeks were so conformed as for each different scaled lyre to be suitable for certain melodies, supposing some of these, or melodies resembling them, to have been adopted by the Church, then (the compass of the organ being restricted to an octave) the various scales of the lyres on the one hand and of the organs on the other would necessarily to a great extent respectively coincide.

The series of octave-scales obtained by taking the seven different positions of the scale of A minor—*i.e.*, by commencing the scale on each of its notes in turn and reading upwards, Mr. Hope regards as false Greek and false Mediæval modes;* whilst the division of these eight octave-scales into four authentic and four plagal he considers a purely fanciful division.

* One Flaccus Albinus-Alcuin who was born in York and lived c. 750, died 804, is the first to mention these scales; he is credited with having arranged them and cast them into form.

That it is so seems obvious. One can understand that the octave-scales based on the second and the sixth of the minor scale should have been separated theoretically from the others, as the beginning note of the first has an imperfect fifth and that of the second a pluperfect fourth, but as each of the others has a perfect fifth followed by a perfect fourth, and *vice versâ*, why a melody should not involve their division into 5 + 4 or 4 + 5, according to the free prompting of the composer seems—if these octave-scales are supposed to be each an abstract repertory of intervals—unintelligible.

The foregoing particulars then suggest that we should in all probability find a certain restriction of form and character in the church themes of this period even if we could properly realise their effect. But that it was as plain and cold as attempted modern reproductions of it, or as the ecclesiastical modes (in their restrictedness in character and limited compass) themselves suggest seems inconsistent on the one hand with the probability of some of the inspirations of Greek or Greco-Latin music having been ultimately adopted by the church, and on the other, with certain enthusiastic allusions to the sacred music of this period, which have

come down to us. Thus the venerable Bede (d. 735) speaking of the appearance, playing and effect of the organ of his time, refers to the player drawing from it "a grand and most sweet melody." Then there is the well known passage in St. Augustine's Confessions: "I remember my tears at my conversion under the melody of thy church, with which I am still affected." In explanation of the absence of this beauty and poignancy of expression from the mediæval sacred effects that have come down to us we must take into consideration the fact that at this period the art was a long way from that great achievement an effectual notation. It seems quite possible that just as many pre-Palestrina sacred works (as well as some of those of his contemporaries)* through special circumstances remained buried many centuries in the dust of libraries yet have recently been found to possess a warmth of spiritual passion and chastened perfection of beauty scarcely attained in the works of Palestrina himself, so the still earlier sacred music to which I have been referring may have contained a beauty and expression that through imperfection of the record is now totally lost.

* Notably those of Ockeghem (1420-1512), Obrecht (1430-1524) and Sweelinck (1562-1621).

Thus much as to the continuity of the art in general through the dark period of the early Christian centuries. As we proceed we shall see that in the course of those centuries while it persisted in the path it had taken in the antique period it was met by circumstances which not only confirmed its progress in that path but unlocked a potentiality destined to enlarge its development at every point, and almost transfigure it in the increase of its power and grandeur—the potentiality namely of modern harmony.

CHAPTER VIII.

EARLY TRACES OF THE ORGAN AND THE VIOL: THE HEXACHORDAL SYSTEM.

THAT music continued in the course of development it was pursuing at the period of the scale of Euclid may be clearly seen by glancing at the practice of the Church in the tenth century. The musical scale as used in the Church at this period is revealed in a poetical description, by a monk named Wulstan, of an organ erected in Winchester Cathedral by order of Bishop Elphege, who died A.D. 951; in which the following suggestive passage occurs. "They strike the seven differences of joyous sounds adding the music of the lyric semitone." According to Dr. E. J. Hopkins, the scale of this organ was the diatonic scale corresponding to an octave of the white keys of the pianoforte with only the addition of B-flat, to which the music of the lyric semitone evidently refers.

The expression itself suggests that it was in the pursuit of melodic effect that this development occurred.

Hitherto in the course of this work I have touched but slightly on the organ, but at this point it is perhaps not inappropriate to give a brief account of this important instrument down to the period we have reached.

Although, according to William Chappell, the Greeks derived the organ from Egypt, a land of reeds, it is, as I have said, only directly traceable to Ctestibus by whose son, the celebrated Heron or Hero, it was improved and whose description of it is the first known mention of it. The earliest known representations of organs appear on medals of the third and fourth centuries. I give copies of two of these.

ORGAN AS REPRESENTED ON THE MEDALLIONS CALLED CONTORNIATES.*

* Supposed to have been struck in the reign of the Emperor Constantine (A.D. 272-337).

ORGAN AS REPRESENTED ON THE MEDALLIONS CALLED CONTORNIATES.

In the larger of these representations, as the reader will observe, eleven or twelve pipes appear mounted on a case, and two men, one on each side, are indicated working bellows.

The following is a translation of a poetic description of the organ by the Emperor Julian (A.D. 331-363).

"Pipes of a particular kind present themselves to my eyes, they are fixed upon a bronze chest. A strong breath animates them, but it is not human breath. The wind driven out of the hide of a bull that imprisoned it passes to the bottom of the appropriately pierced tubes. A skilful player with supple fingers directs by his varying touch the valves attached to the tubes, which, bounding gently under the action of his fingers, give forth a sweet song."

St. Jerome (A.D. 374-420), and Cassidorous, Consul of Rome (died A.D. 560, aged about ninety), also left

descriptions of the Organ. It would seem that the instrument in each of the three cases consisted of bellows, chest, pipes and valves for eliciting the sounds. In the description of St. Jerome fifteen pipes are mentioned. As to size, on the medals, as the reader may perceive, the instrument appears to stand higher than a man; but portable organs such as could be carried from house to house by the servants were largely used throughout the middle ages for purposes of entertainment. These were furnished with six, seven or eight notes.

The use of the organ in the Church appears to have spread very gradually. The following few particulars throw some light on the early connection of this instrument with the Church in Spain, Italy, Gaul, Germany and England:—According to Julianus, a Spanish bishop, it was in common use in his time, *i.e.*, about A.D. 450. A church in Grado, an ancient city in Italy, is mentioned as containing an Organ prior to A.D. 580. Then (in compliance with his request to the Byzantine emperor, Constantine) an Organ was sent to Pippin, the father of Charles the Great, about A.D. 757, from which it has been inferred that before that time there were no organs in Gaul or Germany. In the following century (A.D. 872) John VIII., bishop of Rome,

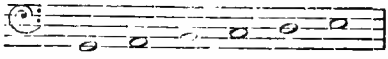
writing to bishop Anno in Germany, asks him to send the best organ that can be prepared, also a tutor. In the next century, in England, St. Dunstan (A.D. 924-988), who was a maker of organs, is reported to have supplied many great churches; and St. Ethelwold, bishop of Winchester (A.D. 963-984), was also a maker. The remarkable organ erected in Winchester Cathedral by Bishop Elphege (to which I have already referred), was, as the reader will remember, also of this century. This organ had four hundred pipes and forty keys; it was played by two musicians, and supplied with air by twenty-six bellows. The organs first used in the Church were probably comparatively small instruments. The larger kind came to be used as spacious and lofty cathedral churches began to cover the land.

The first key-board applied to the organ is said to be that introduced into the organ in the cathedral of Magdeburgh, about the close of the 11th century. There were sixteen keys which are said to have been an ell long and three inches broad. There were no black keys and no pedals.

To resume my general argument—formulated evidence that the principle of our system of overlapping scales was preserved throughout the portion of the

Christian period which my remarks have thus far embraced appears in the Hexachordal system which was in use in the time of Guido Aretino (or Guy D'Arezzo), born end of 10th century, died towards A.D. 1050—and which is associated with his name.

The basis of this system is a series of six notes commencing on the lower G of the bass staff and related as follows:



A similar series commences on the fourth degree (C) of the above, and another on the fourth degree (F) of the second, series. The third hexachord consequently involves B-flat. These three hexachords being repeated in the octave, and the first, in the second octave, the whole constitutes a series of seven hexachords as shown on next page: As the reader will observe, the successive intervals in the case of each hexachord are the same. This fact is expressed by applying the six syllables, Ut, Re, Mi, Fa, Sol, La to each Hexachord. Thus a singer having mastered the melodic relations of a single hexachord can by means of the bridge (or common) tones involved between the hexachords, and by mutation of

the syllable, find easily the sound of any note in an adjoining hexachord.

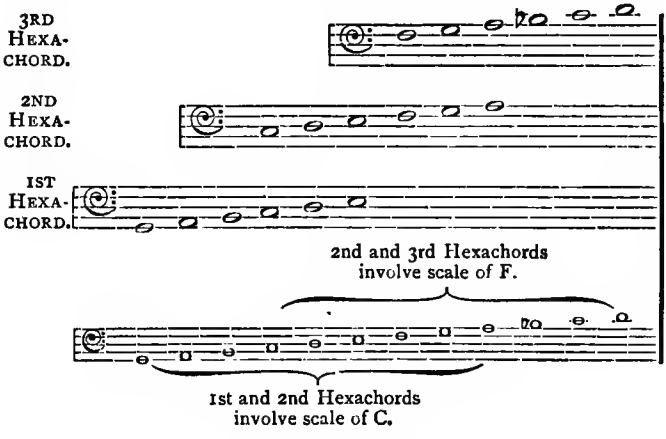
TABLE OF HEXACHORDS.

							7
e e	-	-	-		-	6	La
d	-	-				La	Sol
c	-		-	-	-	Sol	Fa
b	-		-	-	-		Mi
b♭	-	-	-	-	5	Fa	
a	-			-	La	Mi	Re
g	-		-	-	Sol	Re	Ut
f		-	-	4	Fa	Ut	
e	-	-	3	La	Mi		
d	-		La	Sol	Re		
c	-	-	Sol	Fa	Ut		
b	-	-		Mi			
b♭	-	2	Fa				
a	-	La	Mi	Re			
g		Sol	Re	Ut			
F	1	Fa	Ut				
E	La	Mi					
D	Sol	Re					
C	Fa	Ut					
B	Mi						
A	Re						
G	Ut						

These hexachords suggest a fact that will be illustrated over and over again in the course of this work, namely, that system is formed by practice; their princi-

pal use having been to facilitate the re-enunciation of the subject of a fugue based upon a different degree of the scale.

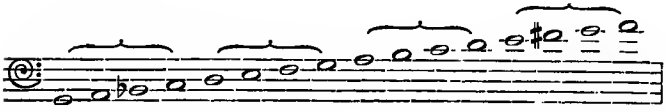
The following diagram shows clearly that the three hexachords which form the basis of the seven, involve the overlapping of the scales of C and F.



That the major scale was in use at the time of these hexachords is visible at a glance. How long before this period it came into use cannot be said. As suggested in the remarks quoted from Aristotle and Carl Engel it seems far from improbable that it did so in man's earliest essays in melody.

That up to the beginning of the 11th century no

further progress had been made in the Church in the development of our system of scales than is suggested by the above hexachords is very doubtful. In the scale of Hucbald (who died sixty years before Guido was born), which embraces four tetrachords involving each a similar succession of intervals, F-sharp as well as B-flat appears, thus:—



Concerning the appearance of F-sharp in the above scale, R. C. Hope remarks that he is not aware of any composition of the period (the 10th and 11th centuries) in which F-sharp was made use of. Its appearance in a system is, however, to me conclusive evidence that it entered to some extent into contemporary practice.

In reflecting upon what little progress in modulation seems according to the evidence of Church music, to have been made between the period of the scale of Euclid and the appearance of B-flat in the organ ordered to be made by Bishop Elphege for Winchester Cathedral towards, as we have seen, the middle of the 10th century, we must consider the almost absolute fixedness of religious ritual in general (which fixedness

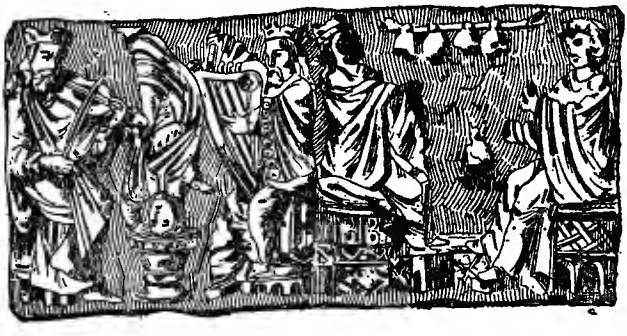
represents not mere conservatism but a vital principle) and that this persistency of form extends largely to details—in which music holds an important place. We must also bear in mind the fact that we do not know the actual limit of the development of the art as practised in the Church at this period, particularly as regards chromatic effect and modulation. We have, however, some evidence of the art as practised out of the Church about this time, a portion of which is in the highest degree both suggestive and interesting—suggestive as regards contemporary secular music, and interesting in the light of the arts' future general development.

(1). At the end of a description of a concert, by Aymeric, a scrivener of the 10th century, the following passage occurs:

"Others from Gascony skipped to the sound of the Musette whilst their companions played the harp and a last group with curved bow imitated the voice of women with the Rebec."

(2). There is a curious scene sculptured over a capital arch of the church of Bocherville (11th century) in which a girl is dancing on her head to the accompaniment of an orchestra which includes two instru-

ments of the viol type played by the bow; one being held and played in the usual way, the other in an inverted position, and both apparently with perfect ease and freedom.



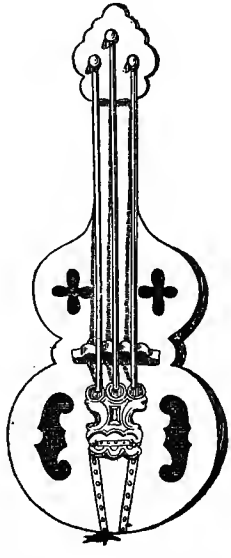
SCENE SCULPTURED ON A CAPITAL ARCH OF THE CHURCH OF SAINT GEORGE, BOCHERVILLE. (XITH CENTURY).

This carving includes the most ancient form of the organistrum (vièle à roue et à manivelle) an instrument of the hurdy-gurdy type. The instrument as represented is large enough to rest upon the laps of two players seated side by side, and consists of a wheel worked upon three strings of which two are drones whilst the third is manipulated by means of a row of stoppers or tangents, which are pressed inwards.

(3). There is a representation of an early viol over the portal of the cathedral of Chartres (beginning of 13th century). It is of heavy structure and has three strings. This instrument, the prototype of the violin, seems to be derived from an ancient Welsh instrument, the crwth or crowth, a kind of barbaric violin of heavy construction having three strings, which were played by a bow, and a finger-board. As in the case of the Irish harp it is consistent with the supposed Asiatic origin of the crowth that it should have existed from the earliest times among a Celtic people in the West. It is referred to as British in the following lines by Venatius Fortunatus:—*

* Bishop of Poitiers (609).

'ROMANUSQUE LYRA PLAUDAT TIBI BARBARUS HARPA
GRÆCUS ACHILLIACA CHROTTA BRITANNA CANAT"



VIOL, XIIITH CENTURY. (CATHEDRAL OF CHARTRES).

Now if we compare these evidences with those I have brought forward relating to antique music, even superficially, we observe at once that an important parting of the ways has occurred as regards the character of the instruments in general use at the respective periods. Though the Lyre and Cithara have disappeared their

type is still visible in the Harp; but the important fact is that a type of instrument that seems to have been quite missed by the ancients—the viol type—has come upon the scene. Leaving the Organ for the time being out of consideration and passing over the Bagpipe, we see in the viol the first unfolding in the development of the art in Europe of a means of producing sustained sounds independently of the breath of man. That a sense of novelty at this unfolding impressed the writer of the description recently quoted is suggested by his speaking of the effect of the Rebec played by the "curved bow" as an imitation of the voice of women. But the main suggestiveness in this description and in these representations, is that in the Rebec and Viol we have the precursors of a family of instruments admitting of every interval and consequently of every scale: not like the Egyptian and Assyrian Tamboura confined to staccato effects but in infinite combinations of these with sustentation and stress having a plasticity approached by no other instrument.

From the foregoing evidence we learn indubitably that the Viol in some form was in use in the 11th century, and as an instrument would be familiar long

before it figured on monuments and in decoration, it seems highly probable that it was in vogue long prior to that period. The following is the description of H. Lavoix (fils) of the position it occupied in the general world of music in the 11th and two following centuries. "The Viol is in evidence from the 11th century. Very general in England, France, Germany and Italy it varies in form according to the particular country and time. Here it is heavy, almost round—to such a degree that it is difficult to understand how the player made the strings vibrate. There it is like the crowth over the portal of the cathedral of Chartres but more elegantly shaped. In the 13th century it is a magnificent instrument—of rich and beautiful design—as in the portal of the abbey of St. Denis. The number of its strings varied from three to six. It was the favourite instrument throughout the middle ages, and the chosen one for accompanying lays, rounds and songs of chivalry." It was with this instrument that those poet-musicians called Trouvères in the north of France and Troubadours in the midland provinces (some of them singers, others, singers and composers), that began to abound towards the end of the 12th century, accompanied themselves.

TROUVÈRE PLAYING THE VIOL. 11TH CENTURY.
MS. NATIONAL LIBRARY, PARIS.

Now the question with which we are here concerned is: what influence this type of instrument is likely to have had in furthering the development of our system of scales? I have pointed out with what powers, beyond those possessed by the Lyre, Cithara and Harp, the Viol armed the singer in his efforts to conquer the world of sound. When in addition to these, and its prevalence, we consider that the goodly company of Trouvères and Troubadours that played it included the popular composers of the period, the likelihood of its having widened the bounds of modulation seems very great.

But two other factors necessary for the development of our system of scales were also unfolding at this period, namely, harmony and diagrammatic notation the beginnings of which, as we shall see, had in them a potentiality of adaptation to future circumstances quite undreamed of. In speaking just now of modulation I did not refer to simple, bodily transposition which there can be no doubt was practised by the Trouvères and Troubadours, but to the extending the design of a melody over more keys than one. This could not have been carried very far without harmony, whilst harmony could not have been carried far without a clear, simple method of notation. That some rules or traditions of practical harmonisation and accompaniment relating to various instruments were in use at this period (some having perhaps descended from antiquity) is far from improbable, but from our knowledge of the circumstances under which the point of departure to polyphony was hit upon, and of the kind of practice which the development of harmony involved, it is difficult to avoid the conclusion that the above harmonisation and accompaniment must have been either crude or very simple. That modern harmony would eventually have become unfolded irre-

spective of the Christian Church is very probable; but under what circumstances it would have done so and how long a period would have had to pass before such circumstances came about it is difficult for us to conceive. All art requires systematic cultivation but the development of harmony demanded such cultivation under special circumstances, namely, recurring meetings of either instrumentalists or singers. The latter condition came about in the organization of music in the Church ritual, in connection with which, moreover, arose with special urgency the need of a suitable method of notation. Thus it was in the atmosphere of the Church that the path to modern harmony was discovered and diagrammatic notation initiated. To the Church then we must return in order to trace the rise and growth of these two important factors in the development of our tonal system.

CHAPTER IX.

THE DEVELOPMENT OF MODERN NOTATION.

THE hypothesis is perhaps worth some attention that the first origin of musical notes was the strokes and points used to voice the consonants in languages, which, as in the case of the Semitic, had an alphabet of consonants only. The Jews at all events who had necessarily been in the habit of using such signs in their writing passed as early as the sixth century to expressing the cantillation and syntax of the lessons read in the religious service, by neumes, as certain small dots, strokes or curves were called. Lavoix states, referring to Europe, that the earliest manuscripts in which neumes are used date from about the eighth century—when the invasions by the barbaric peoples had ceased and each had settled in its place. The facts: that this would be when the Church had spread, and that the evidences of the use of neumes are found principally

in connection with manuscripts relating to the Church service, are at all events consistent with the supposition that their use was derived originally from the Jews. This suggestion, however, I put forth diffidently. Some have supposed them to have had a Northern origin. Paul Lacroix says they were unquestionably imitations of the graphic signs that formed a kind of shorthand of the Romans. As used generally they embraced points, lines, hooks, curves, angles, retorted figures and many other forms. Lavoix states that they are all based on four signs used in speech, which correspond to the French grave and circumflex accents and our comma and period. When we consider that with us the marks of interrogation and exclamation, the comma, colon, semicolon and period, are all imperfect notes, the first indicating very perceptibly change of pitch, the second, expression, whilst all refer to some extent to pitch, expression and relative lengths of silence, in certain combinations; it does not seem at all antecedently improbable that neumes were a development of signs of this nature. The supposition that the word neumes is derived from *pneuma* favours this hypothesis though there is another supposition—that it is derived from *nomen*.

Whatever was the origin of neumes and whatever their detailed meaning the thing of capital importance connected with them from the point of view of this work is the fact that their use in music initiated our diagrammatic system of notation.

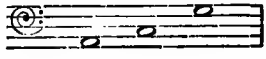
I may illustrate what I mean by diagrammatic in this connection thus:

In both the following figures the differences of pitch indicated, in being realised demand psychic action, but in Fig. 2 that action is far more largely helped by the sensorial impression than it is in Fig. 1, the relative extent of the two musical intervals involved being in Fig. 2 directly apparent by sight alone.

FIG. 1.

A, C, G.

FIG. 2.



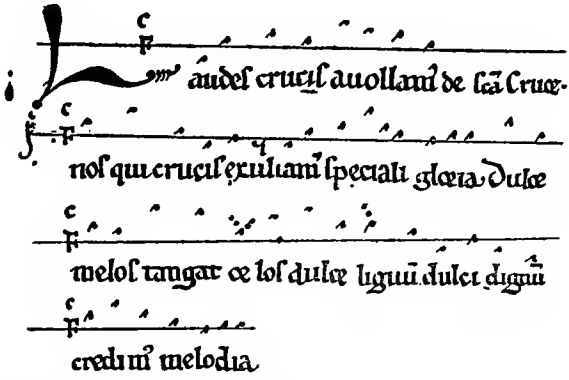
Now in the earliest manuscripts of the Church the neumes are placed at different heights above the words of the text. Thus the position of the neume in the perpendicular dimension indicated in a general way the pitch at which the word beneath it had to be sung. This, though involving a new departure, the importance of which cannot be overrated, was still a very vague method

practically. Accordingly in the twelfth century we find combined with it certain elements of the old symbolical notation of the Greeks and Romans. The Church had in the sixth century employed capitals of the Roman alphabet to represent the sounds of their simple chants, and between the seventh and ninth centuries the range of notes from the lower A of our bass staff to C of our treble, was expressed thus:—

a b c
A B C D E F G a b c d e f g a b c

In order then to render the use of neumes as just described, less vague, certain of these Roman letters were placed at the commencement of each line, their function being to indicate that the neumes on a line with such letters were to be sung to the sounds the latter represented. In this improvement the principle of *position* on the staff *in the dimension of height* representing pitch, became a step more defined. But the next improvement—simply a means of adjustment demanding the slightest inventive power—the drawing a line from the indicative letter at the margin (to facilitate placing a series of neumes intended to be quite level and at the same time to aid the eye in separating them from others intended to occupy a different level)

was another creative step in musical history. It put the first lineament of the actual staff in evidence. The first line ran from the indicative letter F. The following illustration contains the three steps in the direction of modern notation which I have described: (1) neumes written over the literary text at different heights; (2) indicative Roman capitals at the commencement of the line of neumes; (3) a line drawn from F.



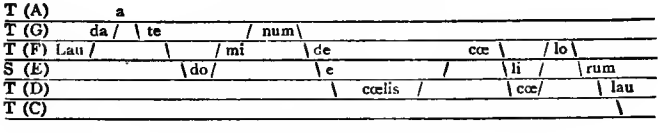
BEGINNING OF THE PROSE SUNG AT THE FESTIVAL OF THE HOLY CROSS. (MS. OF THE XIITH CENTURY.*)

The path of development was now found and in the light of our present knowledge it may seem that the consummation of the staff should have been a quick

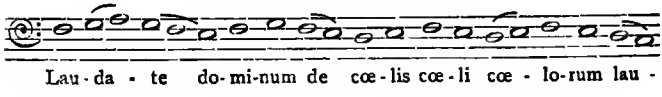
* Copied from the Arts of the Middle Ages by Paul Lacroix.

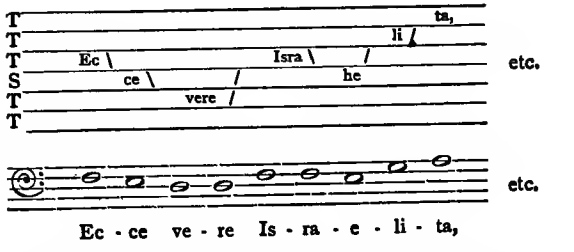
and easy process, but it was not destined to be so. It was no doubt easy to add new lines, but new questions arose. Should the lines be adhered to or would it be better to use the spaces? Hucbald, the monk of St. Amand in Flanders, to whom I have before alluded, had early in the tenth century introduced a staff based upon the latter alternative.

SYSTEM OF HUCBALD.



IN MODERN NOTATION.

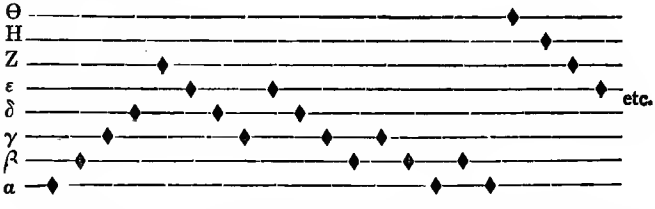




In this system the neume was got rid of, its place being taken by the word or syllable of the text, but if

this change had lasted a system of signs would still in due course have been required to express the length of the sounds, and thus the perception of their pitch and length would have involved two distinctly separate acts of attention. In the simple retention of the neume there was the following development: whilst its position denoted pitch its shape got to express length, and these two qualities that give meaning to a musical sound were so expressed that the impression of one involved that of the other. Both were thus perceptible at a single glance yet without possibility of confusion.

Almost contemporaneously with this system of Hucbald, in which the spaces alone are employed, another appeared in which the spaces are left vacant and only the lines used.* In this system the notes have

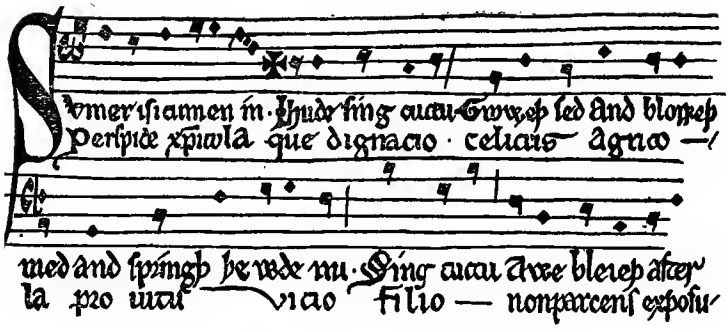


* This system was described by Vincentio Galilei in 1518.

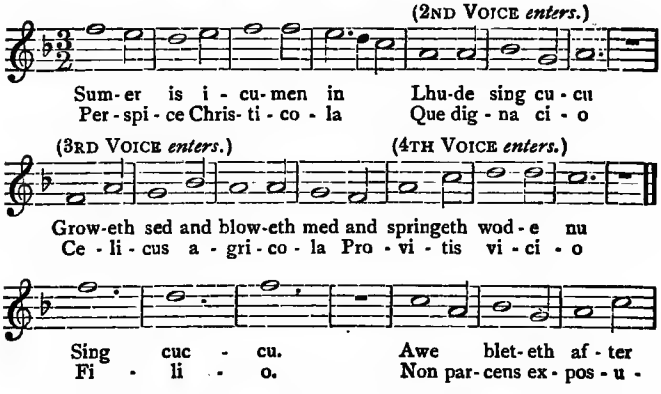
returned, being represented by points or diamond-shaped notes, and the degrees of the scale are determined by Greek letters placed at the commencement of the lines.

As early as the beginning of the eleventh century the use of alternate lines and spaces is in evidence. In an ancient office book once used in Winchester Cathedral and now preserved in the Bodleian Library, the notes of the Plain Chant are written upon the lines and in the spaces of a regular four lined staff. At the same time a considerable portion of this MS. is written in the old style, *i.e.*, in neumes without any staff at all, but all seems written by the same hand. As the matter of this MS. embraces a Litany in which there is an allusion to Ethelred (died A.D. 1016), it is concluded that it was written in his reign.

The following example,—taken from the celebrated round, "Sumer is icumen in," the most ancient English composition in harmony extant, and the period of which is considered to be at least as early as the middle of the thirteenth century,—is written in the lines and spaces of a six lined staff.



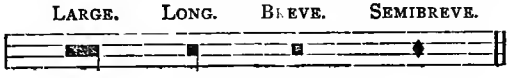
SOLUTION IN MODERN NOTATION.



Traces of the staff of five lines appear as early as the thirteenth century in a MS. tract by W. Odington, a monk of Evesham, Worcestershire, but it was not until the beginning of the sixteenth century that the form of staff became settled definitely for the time-being, four lines for sacred, five for secular music.

A natural consequence of the development of the staff was greater exactitude and regularity in the shapes of the neumes. Thus gradually various definitely shaped notes came into use, their forms expressing their relative length, and hence the principle in modern notation of the time of a note being represented by its shape.

To us it seems curious that the pioneers in measured music should have begun by making their standard or longest note divisible into three not two shorter notes. The reason of this might perhaps form an interesting subject for speculation. It might be enquired whether there is not a markedly lifted flow in a dignified triple rhythm, and in comparison a somewhat halting motion in duple, which may have been felt by peoples of enthusiastic temperament or in the more imaginative mental stage of primal artistic awakening. Whatever the cause, we find in the early record of the relative length of notes the triple preceding the duple division in order of arrangement. The following names and shapes represented the different notes in order of lessen-

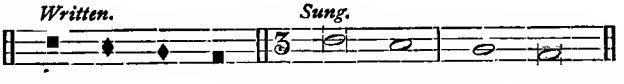


ing length, each of the first three having three times the value of the next shorter note.

A note subject to this order of division was said to be "perfect."

But the above names and forms stood also each for two of the next shorter notes, subject to which order of division a note was said to be "imperfect."

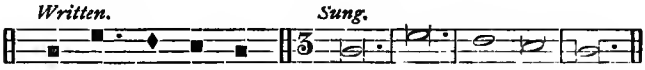
In the normal use of the above notes—in the absence of any expression of modification—a note was considered to be perfect, but when either a long or a breve was immediately preceded or followed by the next shorter note it became worth only two notes of the latter kind. In the following example the first and last notes, they being considered perfect, would in themselves be each worth three semibreves, but their position (one being before and the other after the next shorter note) reduces the value of each to two semibreves.



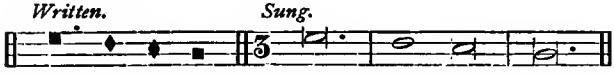
When a dot was placed after a note rendered imperfect by position it indicated that, notwithstanding, such note was to be considered perfect. Here we find

the effect of the dot is to increase by one half the length of the preceding note—but under special circumstances. Its use here, therefore, is not quite the same as it is with us—to increase by one half the value of the preceding note under all circumstances.

Thus in the following example the second note (a breve) being succeeded by a semibreve would become imperfect by position were it not followed by a dot, while the fourth note as it follows a semibreve becomes imperfect.



Another and much more complex use of the dot may be thus illustrated:—the value of two breves being reduced each to two semibreves through two of the next shorter notes (semibreves) coming between them, a dot placed after and a little above the first breve not only restores the normal value to both breves, but doubles that of the second semibreve, as in the following example.



The fact that the foregoing rules apply to particular

circumstances, suggests that they arose out of such circumstances. In the normal use, for instance, of the four different notes (see Example on page 183), there is no note that expresses the time of two of the subdivisions of any of them. In the exigence, therefore, of having this latter proportion of time to express, a composer might naturally use the form for the perfect note subject to a modified interpretation; and such an exigence occurring frequently under the same conditions may thus have first given rise to the rule under which a perfect note became imperfect. The reader will understand that I assume these rules came into existence before time-signatures.

There is another rule which seems to have first arisen out of an immediate practical requirement: It refers to the use of a red note, at a time (as it seems), when the black note prevailed. The rule was that a note coloured red lost a third of its value when perfect, a fourth when imperfect. Now the effect of this rule upon a perfect note was in itself precisely similar to that of the rule under which such a note was by position rendered imperfect. In both cases the note operated upon was reduced to two thirds of its normal value. The difference between the rules was that the first

mentioned was absolute. It was in duple time where the special effect of the coloured note came into operation. Here it enabled the composer to express at once three quarters of the value of the note used. Thus a red semibreve in duple time would have the value of three half-minims. Now we can well imagine when the dot was only used to *restore* value and before the use of the tie, a composer hitting upon the expedient of the coloured note as a quick and effectual way of supplying the expression of time-value needed.

The foregoing rules of themselves betray distinctly that contemporary composers were in the habit of passing from one form of time to the other in the same movement; but there is ample evidence of this in early music itself. The reader will not fail to remember what a conspicuous feature this practice is in the examples I have given of traditional Jewish music, and in the chorus of the Mewlewi dervishes. That the notation in these examples is modern, and represents an attempt to express the freedom of the originals as regards time tends rather to strengthen than to weaken the conclusions to be drawn from the above resemblances, the conclusions, namely (first) that the different kinds of time were originally commingled, and (secondly) that

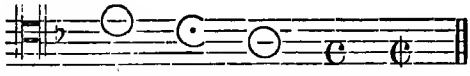
the generally keeping to one or the other kind in the same movement is a development.

I have not referred to every fact in the history of notation up to this point. There were some other rules but they were of the same improvisate character. They applied to particular circumstances. The great interest connected with the details of this subject is their revelation that notation grew as part of concrete music —that the regulation of time-values was at first an inherent part of the general musical prompting. The written signs stood for the whole effect however vaguely and imperfectly they represented it. Development was evolution. A note under certain circumstances lost a third, half or a fourth of its value. The first note equally divisible by two is a result in the practical working with notes divisible by three. So a note divisible by two is arrived at in another way—in the note that is *doubled* by a certain power of the dot. So in the use of the red note we see (as well as—in the case of perfect time—a third way of arriving at a note divisible by two) a practical and ready means of expressing three quarters of a note. Then the commingling of triple and duple time betrays the same process of organic differentiation.

The number and variety of these instances is perhaps sufficiently convincing that notation is the result of a succession of purely practical expedients prompted, so to say, at the moment in the expression of the concrete effect; but there is another of peculiar interest. The reader will observe in the example "Sumer is icumen in" that a short upright stroke occurs in certain places. Then referring to the solution, it will be found that at each of these places an interval of time the length of a bar intervenes, the lapse of such an interval being necessary to preserve the rhythmical symmetry. These strokes then are intended to indicate the uncompleted measure of time not otherwise expressed. Thus they enclosed symmetrical (though not always equal) measures of time and brought a strong pulse of the rhythm upon the note immediately following them. Here then we see in a device seemingly thought of at the moment the first lineaments of bar-lines fulfilling largely their important dual function.

There is scarcely a doubt that the relative orders of accentuation and time-values represented by the perfect and imperfect note were not only commingled in early music, but in such a way that the difference between triple and duple measure was fully

appreciated. This is evidenced in the following copy of the signs at the beginning of the staff, of portion of the "Credo" of a mass by Hobrecht.



As the reader will see by reference to the table below, the first sign, O, signifies that three semibreves go to a breve; the second, C, that three minims go to a semibreve; the fourth, C, that two semibreves go to a breve; and the fifth, ₵ that two minims go to a semibreve.

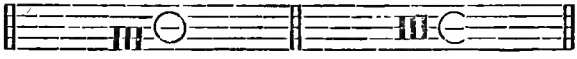
The principle of the evolution of notation which I am illustrating probably explains to some extent the extremely, and at first sight unnecessarily, elaborate character of the means by which triple and duple measure were respectively indicated. In the system adopted the time-signatures were modified, as the difference between perfect and imperfect applied (1st) to the large and long and the long and breve; (2ndly) to the breve and semibreve; (3rdly) to the semibreve and minim; then in each of the three cases the general name for the subject was different. In the first case

it was called Mode, in the second Time, in the third Prolation. The different signs in the three cases were as follows:

MODE.

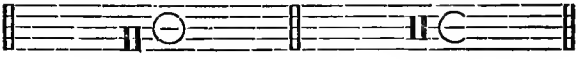
GREATER MODE PERFECT.
In which one Large goes to three Longs.

GREATER MODE IMPERFECT.
In which one Long goes to three Breves.



LESSER MODE PERFECT.
In which one Large goes to two Longs.

LESSER MODE IMPERFECT.
In which one Long goes to two Breves.

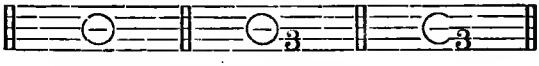


TIME.

PERFECT TIME.

In which one breve goes to three semibreves.

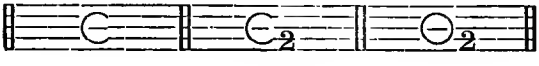
Or thus. *Or thus.*



IMPERFECT TIME.

In which one breve goes to two semibreves.

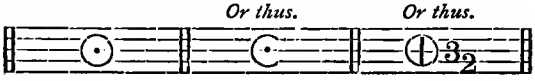
Or thus. *Or thus.*



PROLATION.

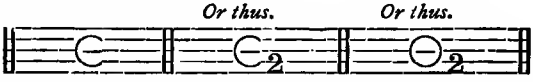
THE GREAT PROLATION.

In which one semibreve goes to three minims.



THE LESSER PROLATION.

In which one semibreve goes to two minims.



Now on the surface these different names for the same process call for some explanation beyond pure love of formality, and one natural explanation is that the different names arose as the process was applied at different times or places. It would probably at all events have been applied to the large and long before it was applied to the breve and semibreve. Further, we are indebted for our knowledge of these various particulars concerning the subject of time to a work entitled "Ars Musica Mensurabili" (considered the earliest on the subject) by one, Franco, a monk of Cologne, about 1047-1083, and this work gives the impression that it is intended as a compendium of the

practice of the period. Thus it would be the summing up of developments that arose at various antecedent times.

The following are the principles operating in the adoption of the various signs in the foregoing examples.

Rests show the proportion between the large, long and breve. The circle, the figure 3, and the point or dot denote "perfection."

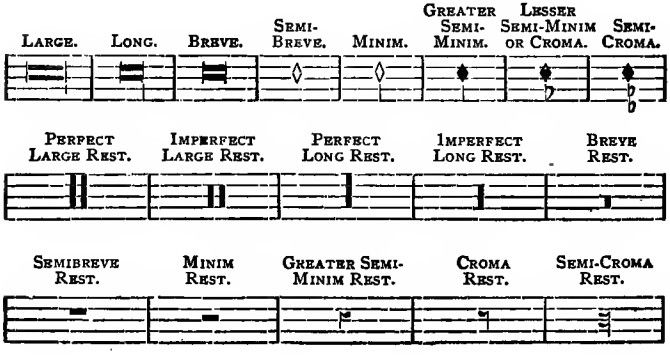
The half-circle and the figure 2 denote "imperfection."

A bar through the circle or semi-circle indicates the diminution of the standard note by half, as also does the inversion of the figure, and in a few cases a double bar used in the same way indicates the double diminution of the standard note.

For a considerable time the semibreve was the shortest note used. The minim (from *minimus*, the least) is said to have been invented in the thirteenth century, but some are of opinion that it did not put in an appearance until the fourteenth century. It was, however, soon followed by the half-minim (or crotchet) and the quaver—first used as an ornament, hence its name.

The view that I have expressed—that the use of the red note sprang out of necessity, is supported by the fol-

lowing facts: (1), that when white-headed notes came to be used, black-headed notes among white carried on the function formally fulfilled by red among black; (2), that both red and black fell into disuse as notes expressing shorter divisions of time appeared. White-headed notes (always written on a staff of five lines), are found as early as the beginning of the thirteenth century. Towards the end of the thirteenth century both red and black notes fell into disuse. Towards the end of the fifteenth century the use of white notes little differing from the forms retained until the close of the sixteenth century, seems to have been an accomplished fact for some time, for the figures of these notes and the corresponding rests are given in one of the earliest works on music ever issued from the press—the Practica



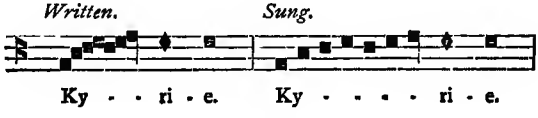
Musicæ of Franchinus Gafurius, printed at Milan, 1496. The foregoing is a plan of the notes and rests that appear in this work.

As a matter of archæological detail I may here add, that according to R. C. Hope, the first printed notes were open; the first book printed with round notes was issued at Avignon in 1532, but round notes do not again appear for 150 years; in England they began to supersede square ones, about 1700.

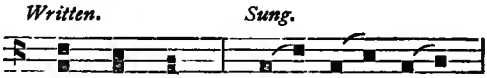
CHAPTER X.

THE EMERGENCE OF PLAIN SONG.

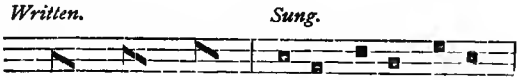
A PECULIAR illustration of the fact I have several times called attention to, that the early musical scribes took the first way that suggested itself of meeting a special exigence, is the way in which they indicated that a series of notes had to be sung by the continuous production of the voice, as in a modern run. This effect they somewhat naïvely though very graphically expressed by writing the notes so closely together as almost to touch. Such series of notes were called "ligatures." When the notes formed a run they were placed as in the following example:



When they consisted of only two notes, ascending, they were written one over the other, the lower being always sung first; thus written, they were said to be "bonded." See the following example.



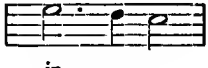
But when consisting of only two notes, descending, they were expressed by the following signs,—in which the upper end of the figure is supposed to rest upon the line or space denoting the first and higher of the two notes, and the lower end, upon the line or space denoting the second and lower of the two notes.



By some historians ligatures are said to have come into use before strict time was observed or, if there ever was such a time, when music was unmeasured. Thus R. C. Hope in introducing the subject of ligatures, says:—"Strict time as now observed was quite unknown in the music of the middle ages anterior to the 11th century," and W. S. Rockstro, also in reference

to ligatures, says, "In early times the notes of the plain chant were all of even length." These two remarks appear to me to demand some comment in order to prevent their conveying a wrong impression and one probably different from what the writers quite intended to convey. The very rules given by these historians, which evidently aim to prescribe the relative lengths of some of the notes of ligatures, are evidence that the effect to which they related was to some extent measured. That the latter was the case is moreover clear from the fact that Franco names differently those ligatures which began respectively with a breve, long or semibreve; and also those of which the last note is a long or a semibreve. But if the principle of the "ligature" (which as we have seen relates to the manner in which the sound is produced) works in connection with the principle of "time" in Franco's examples, why should we not assume that it had always done so?—that if some variation in the time entered into the gliding production of sound in Franco's time it had not done so from the very beginning of gliding effect? Here we see how difficult it is to specify a period when measured music did not exist. The simple fact of notes expressing certain different yet definitely

related time-values involves the existence of measure in a certain degree, and not only at the earliest period when such notes existed but before, as the thing would precede the name, or sign. In the short extract from "Sumer is icumen in" we find a quite decided measure composed almost exclusively of two differently shaped notes. This invaluable manuscript serves also to illustrate—to pass to the question of the antiquity of strict time—that the absence of strict time cannot be inferred from the absence of its clear expression in ancient manuscripts. For though in the manuscript of the above round the time is fairly clear it is still indicated far from precisely, and in some places vaguely as in that corresponding to the following (the fourth) bar of the "solution."



in.....

Yet can we doubt that the conception of this Round in the minds of its contemporary singers was as clear as it is in ours? and that its effect when sung by them was as sharply defined as in our interpretation of it? Moreover, the very structural form of the Round rests

upon the observance of strict time, and thus points to an indefinitely long period of development throughout a large part of which the knowledge and practice of strict time must have existed.

In considering the two remarks quoted, we should also take into account the greatness of our ignorance of the living effect of the music of the Church in the ages vaguely referred to by these two writers—who nevertheless are my principal authorities in attempting to point out this ignorance.

First, then, R. C. Hope in contending that no invention of any system of notation can be attributed to St. Gregory the Great, Bishop of Rome (590-604), refers to certain facts which go to show that no written music existed up to at least the beginning of the 9th century. These facts are (1) that Isidore of Seville (d. 636) distinctly declares that no means of recording music existed in his day; (2) that Amalarius Fortunatus (who was sent by Lewis the Debonnaire to request of Gregory IV.,—Bishop of Rome, 827-844,—a sufficient number of singers to instruct the people) tells us, that "neither were there in Gaul or at Rome any books wherein it (the chant) had been written."

Secondly, W. S. Rockstro after making the remark

quoted, says: "For nearly 400 years after its introduction into the services of the Church, Plain Song was transmitted from age to age by oral tradition only." Then having stated as a positive fact that St. Ambrose, Bishop of Milan (d. 397), "taking the praxis of the Eastern Church as his model promulgated a series of regulations which enabled his clergy to sing the Psalms, Canticles and Hymns of the Divine Office with a far greater amount of precision and purity than had hitherto been attainable, proceeds thus: "It is difficult now to determine the exact nature of the work effected by this learned Bishop though it seems tolerably certain we are indebted to him for a definite elucidation of the four Authentic Modes in which alone all the more ancient melodies are written." Thus far, then, we have according to this writer a certain kind of musical effect called Plain Song, and referred to as having been practised by the Church for 400 years. In the following paragraph it is spoken of as "the rich treasury of Plain Song Melodies bequeathed to the Church by tradition." But we have not the slightest direct knowledge of the effect of these melodies.

Then, passing to St. Gregory the First as the next

great reformer of the plain chant, W. S. Rockstro says: "During the two centuries which had elapsed since the introduction of the Ambrosian Chant at Milan innumerable hymns had been composed, and innumerable melodies added to the already lengthy catalogue. All these St. Gregory collected and carefully revised adding to them no small number of his own compositions, and forming them into a volume sufficiently comprehensive to suffice for the entire cycle of the Church's Services. The precise manner in which these melodies were noted down is open to doubt; but that they were committed to writing in the celebrated Antiphonarium * * is certain; and though the system of Semiography then employed was exceedingly imperfect it cannot be doubted that this circumstance tended greatly to the preservation of the Melodies from the corruption which is inseparable from traditional transmission."

We are thus distinctly told, that up to the period of St. Gregory (*i.e.*, about 600 hundred years after the introduction of plain song into the service of the Church), no direct evidence whatever of its effect is forthcoming; but *at* this period, in the antiphonarium

of St. Gregory just referred to, such evidence at last appears.

Now this latter fact R. C. Hope distinctly disputes. He traverses the several traditional claims that have been put forth by historian after historian on the part of St. Ambrose and St. Gregory as musical reformers, but as to the claim in question on the part of the latter his argument rests mainly on the following statements: —

First, in the year 589 the observance of Thursdays by the Church was solemnly prohibited by the Council of Narbonne. This prohibition remained in force until the episcopacy of Gregory II., who occupied the See of Rome, 716-731, and he enjoined the celebration of the sacred rites on *the Thursdays in Lent only.* This last detail is remarkably confirmed by the Liturgical books. The Gelasian Sacramentary at the end of the seventh century does not provide a single mass for any one of the Thursdays in Lent.

Now in the Sacramentary ascribed to St. Gregory I., we find a Mass assigned to each of these days.

Secondly, the music of the above masses is not new but is borrowed from the Sundays after Trinity, or as they are termed in the Roman service books, "after

Pentecost." But these Sundays were unknown until the end of the seventh or beginning of the eighth century.

Thirdly, the attribution to St. Gregory of an antiphonarium rests on the sole and uncorroborated statement of John the Deacon who flourished about 880 —that is, 286 years after the death of St. Gregory—whilst all other ancient writers, including Isidore of Seville (Gregory's contemporary), the venerable Bede in the next century, and Paul Warnefried under the Emperor Charles the Great, are quite silent on the subject, though the two first mentioned,—Isidore of Seville and Bede,—were much interested and concerned with the Liturgy, and both were musical writers. To this R. C. Hope adds that the documents from which John the Deacon bases his assertions do not in any particular agree with the calendar of the time of Gregory I., whereas they do with that of the Roman Liturgy at the beginning of the period 750.

Fourthly, R. C. Hope brings forward the assertion of Mons. Gevaert, that it is quite clear from internal evidence that the original of the Antiphonarium erroneously attributed to St. Gregory I. (of which there is an imaginary transcript in the

monastery at St. Gall), cannot possibly be of earlier date than the latter part of the 8th century.

As regards the Gregorian Sacramentary, R. C. Hope states that the Abbé Duchesne, "the latest and best authority on liturgical matters," assigns its date to the 8th century, and considers it the work not of St. Gregory I., but of Adrian I., Bishop of Rome, 772-795. Finally, R. C. Hope thus states the outcome of his argument in this matter: "As St. Gregory died in 604 the Sacramentary and Antiphonary which bear his name are at least a century and a half later than his time."

Leaving this particular matter as above represented respectively by these two authorities, the following is clear: According to R. C. Hope we have no direct knowledge whatever of the music sung in the Church for at least 700 years after its first introduction; to R. S. Rockstro, for 600 years, and that all idea of the effect of the music sung at least before the period of Gregory, must be based on that either first written down or freshly composed subsequently. It must be then from some of this latter music as given in the most authentic and reliable records that W. S. Rockstro (who was particularly qualified both by his position and

great erudition to judge), would arrive at the conclusion expressed in his statement that in early times the notes of the plain chant were all of even length—implying that this regime of notes of even length embraced the whole period from the rise of the Christian Church to the period of Franco—over at least a thousand years.

That a type of effect composed of evenly sustained sounds largely of equal length had become rooted in the Church by the end of the dark period there can be no doubt. What it precisely was in its simplest and primitive form, and how long that form prevailed, we do not know, but that this general type of effect should have been preserved in the Church throughout this long period and emerge into the light of general knowledge in comparative integrity, seems almost as wonderful a thing as the varied world of music that developed from it, for—largely in virtue of the material and moral circumstances that during this period attended it—there was destined to arise out of this special stream of musical energy those higher organised forms that have made music a serious, self-poised art.

CHAPTER XI.

THE PLAIN CHANT THE SPIRITUALISED BASIS OF THE HIGHER FORMS.

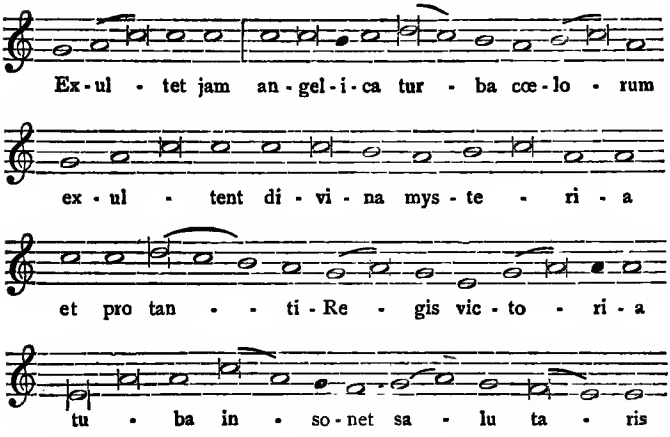
THE following extract, quoted by W. S. Rockstro as an example of Plain Chant, is from a work which he states is generally considered to be the finest copy of this kind of sacred song which we possess. It is the first phrase of one of the proper melodies from the oldest known edition of the Sursum Corda Mass, dating from the year 1075. It is interesting to notice that W. S. Rockstro speaks of this melody as being "like the Credo and some other melodies we have noticed, developed from a few simple phrases often repeated and woven with due attention to the expression of the words, into a continuous whole." The reader will not fail to observe that this remark applies

to most of the examples I have given of ancient Jewish music as well as to the Chorus of the Mewlewi Dervishes, and thus how similarly the primal musical instinct works in separate times, places and peoples.

"EXULTET"

FROM THE SURSUM CORDA MASS.

(Sung during the blessing of the Paschal Candle on Holy Saturday).



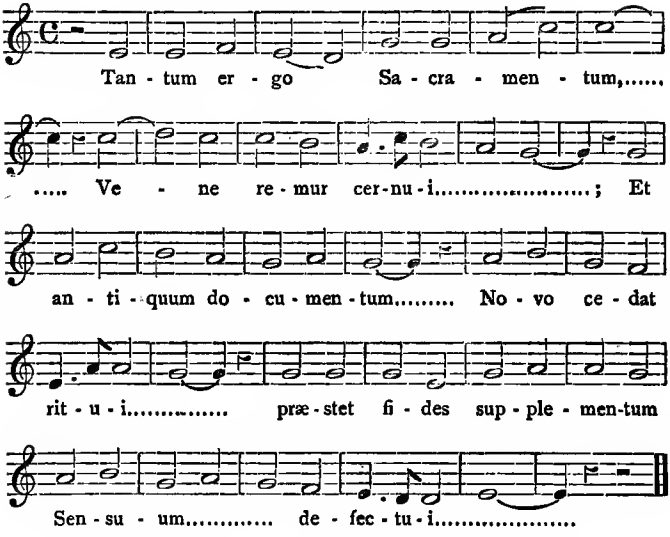
Notwithstanding the marked contrast between the above example and those I have given of early Jewish music—in the perfect preservation of the sustained style, with its expression of assured feeling, of

the one, and the broken style and often strongly agitated feeling of the other—there is, as I have marked, much in common between the music in both cases. In both the exhaustless pressure of the moral burthen, as expressed, by the words, so dominates the music that the rhythmical form of the latter follows the lingual phrasing. Notwithstanding, too, in the above example the constituent notes are so uniformly of even length, variety in sustentation is largely used, whilst the *dwelling on syllables* and the *carrying the voice*, are most important means of expression.

As the music of the Church Liturgy comes clearly into view, we find the type of effect of the above example so far differentiated in the melodic direction as to form constructions which, though still resting at bottom on sustained sounds of generally even length, yet in their broad features betray sufficient variety to unfold vaguely the effect of art-symmetry. The extract on the following page may be regarded as an example of this kind of construction.

This smooth basis of long sustained and generally even sounds continued as perfectly symmetrical constructions arose—still breathing the full assured spirit

HYMN TO THE HOLY SACRAMENT.



of the primal chant but kindling warmer as it became more articulate. Full and most conclusive evidence of this exists in the great Dutch masterpieces composed between the latter part of the 14th and the end of the 16th centuries, which in William Dufay, are linked to the Plain Chant in the stage of *descant.* In some movements in these works the fugal process unfolds, not in the excited, hurried motion heedless of expression with which it is generally associated, but in deliberate movement of broad

phrases based on long-breathed sounds. I was one of the very small portion of the public that seized the opportunity of listening to certain of these compositions which were performed in London some years back under the direction of Daniel De Lange of Amsterdam assisted by a choir entitled "The Amsterdam à Cappella Choir" composed of the most eminent musical talent that the Netherlands afforded. I endeavoured at the time to express some of the impressions I received. I here subjoin some of my remarks in order that, in so far as they reflect faithfully the character and spirit of what I heard, they may place the reader *au courant* with this deeply interesting retrospective effect. It will be observed that they emphasise the two points to which I have just been referring—(1) the fact that the material of these constructions is continuous—every line being composed of sustained sounds, (2) their full-souled spirit.

"How shall I attempt to convey the effect of the Agnus Dei of Jac. Obrecht (1430-1524)? Long sustained, full, pure harmonies breathing of feeling and moving in massive, gracious phrases, in 'imitation' so deliberate as to be consistent with the most intense expression! Or of the Kyrie e Christe of Johan Okeg-

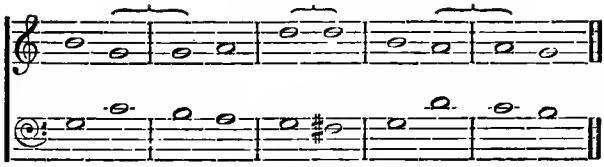
hem (1420-1512), in which is neither sweet sentimentality nor meaningless elaboration, but prayerful simplicity,—a musical picture of a kneeling, awe-stricken suppliant? Or of the Et Incarnatus Est of Josquin des Prés (1445-1521)?—like the last, simple and appropriate in form, and that form subordinate to the master impulse of the composer—expression. Sung almost in a whisper, it breathed of solemnity and mystery. Only the phrase 'et homo factus' emerged from the otherwise sustained *piano*—just accentuating the one suggestion of the natural world. Though art is progressive in form let those who boast themselves in this remember that the level attained by the musical emotion does not, therefore, get correspondingly higher. Certainly, as regards sacred effect, I felt that the first listeners to these old masterpieces were under no disadvantage as compared to ourselves. The beauty of harmony they enjoyed in all fulness and in perfect purity. Indeed, the return in thought to modern sacred effect, particularly in its more elaborate forms, I felt was in some respects a descent. As handled by these Flemish masters the choir is an organ having the sustaining power of that instrument but infinitely purer and more expressive intonation, combined with human

articulation; and those who listened to it in the far past entered the higher moments of musical experience. As I came out after hearing this unaccompanied choir I felt that in that virtually empty hall I had been close to the spirit of music, and that to know that spirit I needed not to hear another note."

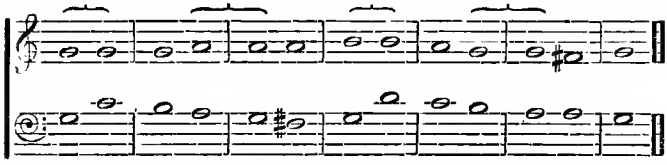
The subject of the Plain Chant was led to, as the reader will remember, by some remarks quoted in connection with the ligature, the ligature being an early, if not the first, form of differentiation in the Plain Chant.

Another element in our system of notation, which like the *note*, *staff*, *clef*, *dot*, *bar-line* and *time-signature*, has a life-history, and of which the function became extended far beyond that for which it was originally devised, is the *tie*. The tie appears to have been first thought of mainly for a rhythmical purpose. Morley ("Practical Music," 1597), describes two kinds of counterpoint, which he calls respectively long and short, and short and long, in each of which a single note alternates with two notes bound together, the sign of the tie being formed like an ordinary bracket, as in the following examples:

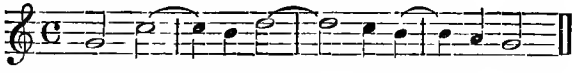
SHORT AND LONG.



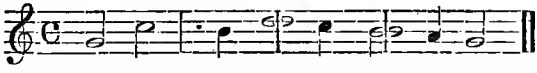
LONG AND SHORT.



Now, it will be observed that in this use of the tie the notes are simply lengthened,—in the above examples they are simply *doubled* in length. But even this use was found to aid clearness of expression, irrespective of rhythm. Thus, before the tie was used, the following passage

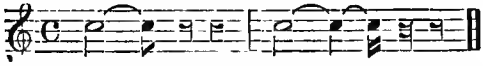


had to be written thus:—

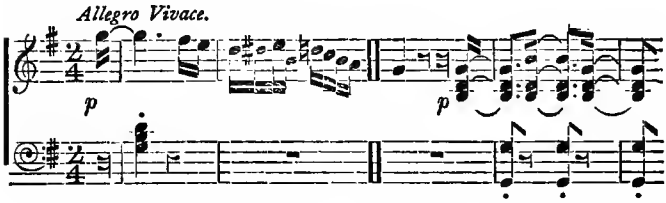


But it was also found that the tie was of further use than this. It met the same kind of exigence that

prompted the invention of the coloured note, the exigence of expressing an *irregular* length of sound, but it met it under all circumstances. Notes expressing the various smaller subdivisions of time having then come into general use, it was found that a time-value composed of any particular succession of them could be expressed by means of the tie, as in the following examples—the additional time not being limited, as in the use of the dot, to one half, or, as in the case of the double dot, to three quarters, of the antecedent note.



And it was found still further that the added time-value could be expressed before as well as after the principal note. The following example illustrates this use of the tie in combination with its original rhythmic use:—



Flats and sharps became unfolded in our system, in

the exigence of transposition in relation to a fundamental series of sounds. Taking the scale of A minor as given by the white notes of the piano, the order of the tones and semitones will of course be different, starting from different degrees, but it follows from the relation of the two diatonic semitones that the order of the tones and semitones starting from any degree chosen can be reproduced on the fourth note from that degree ascending (or fifth descending) by moving one of the semitones a step down, and on the fifth ascending (or fourth descending) by moving the other semitone a step up—in each case by a single alteration. Hence the order in which the scales with flats and with sharps are respectively arranged. In the "Tetrachord conjoined" of the scale of Euclid we see the former process definitely illustrated—in the rejection of B and the substitution of B-flat. In the table of the hexachords of Guido we see the same process—in this case clearly prompted by the exigence of transposition. In the tetrachords of Hucbald we see that F-sharp is unfolded in the transposition of a certain model tetrachord, but whether or not this was its first appearance is quite uncertain.

CHAPTER XII.

CONCLUDING REMARKS ON NOTATION: THE LESSON OF ITS DEVELOPMENT.

I HAVE now shown how the principal elements of our system of notation came into existence. We have seen that each was simply the readiest means by which a present exigence could be met; yet notwithstanding this each proved the germ or essential unit of a function having a reach of action not dreamed of by its original devisor. Thus from *accents*, or other signs in the use of language, the *neume* was chosen as a ready means of representing a sound, its indefinite shape lending itself easily to modification, and thus to differently formed *notes*.

Then the simple idea of placing the neumes at different heights above the text in order to indicate the

varying pitch of the voice in the singing it, contained the great principle of the *staff*.

Next, the placing at a certain height at the beginning of each row of words a letter expressing (on the old system) a certain definite pitch of sound, introduced the principle of *clefs;* and next, the scratching a straight horizontal line from this letter across the parchment, in order to render the guidance of the clef more precise, placed the first *line* of the staff in evidence.

Further—as regards time—I have pointed out the following instances of incidental beginnings leading to important after developments:—

The primal instinct of rhythm led first to the *triple* division of the note, and in the use of this mode of division the *duple* division became unfolded, this latter division having been indicated in three ways:—by the *position* of the note, by the *doubling* function of the dot, and by the *halving* function of the red (and afterwards the black) note.

The present function of the *dot* (of increasing the length of the preceding note by half) was at first confined to restoring value. The *tie* from being used to connect two even-lengthed notes into one for the pur-

pose of varying the character of a certain form of counterpoint, became, as notes were more minutely subdivided, available for connecting any lengthed notes. Thus (unlike the dot) the tie became available for lengthening notes in any proportion *immediately*, whilst it permitted the attaching the added length to the beginning as well as the end of the note lengthened. This simplest of devices begun in order to connect into one note, two even-lengthed notes—involving occasionally the smoothest effect of syncopation—becomes indispensable to the expression of the minutely elaborate phrasing of Wagnerian accompaniment!

A short, perpendicular stroke of the pen, made to indicate the arrest of the music during a "foot" of the poetic rhythm, initiated the important function of *bar-lines.*

The triple and duple forms of accentuation, prompted naturally in the poetic use of language, became elements of music at first (as in language), commingled for purposes of immediate expression. Time-signatures thus appear to have been commingled before they were used separately.

Remarkable as it seems that beginning with the neume and the principle of the staff, this series of de-

vices destined each to be subsequently so fruitful in use should have been hit upon in the spirit of seizing upon the first available means of meeting an exigence —that modes of procedure involving the slightest thought should have led directly to uses that the most far-sighted could not have then contemplated—there is a certain explanation of it—if it can be called an explanation. It is, that such coincidences are *essential* to the result that calls attention to them. Through our short tenure of existence we regard coincidence as a kind of freak of circumstance, yet it is a deep constructive principle in nature, and, as we have just seen, may also enter into man's operations. A little thought suggests how largely all important development depends upon it. It would take me too far out of our present path to attempt to demonstrate this great fact, but we shall come upon another and wonderful instance of its action in music, as we proceed.*

I have pointed out that advanced musical effect demands a simple system of notation. Thus the triumph of our system is connected with its simplicity, which

* The consideration of this principle is entered into more fully in my work "The Deeper Sources of the Beauty and Expression of Music."

is revealed in the ease and brevity with which its principal features may be described; thus: —

For pitch, mainly position has to be observed. As to time-value, the white, or open, note is the longest. A tail attached to such a note lessens it by half. All other notes are black and all have tails, but only in the case of one of these has the tail any significance: with a tail a black note is half the length of the open note with a tail. The relative lengths,—proceeding always in the order of duple division,—of all the other notes depend in inverse ratio upon the number of half arrow-heads (called originally hooks) attached to the tails, beginning with one, which indicates half the value of the black note without this appendage to the tail. Further, any note is lengthened by half when followed by a dot; and two notes of the same pitch connected by a tie express a single sound having their sum time-value. Each note has a corresponding rest-sign.

One peculiarity of our system of notation is very suggestive. Notwithstanding the formation of our system of overlapping scales, the staff presents as simple an appearance to the eye as ever. The intermediate degrees of pitch that are now used are ex-

pressed not by an extension of the diagrammatic principle, but by a return to signs—by flats and sharps. This is the *first* significant step in this development. The *second* is, that (except where a scale is used only incidentally) the signs modifying the purport of the staff are placed once for all at the beginning of the line of music after the clef, leaving the staff to the eye as simple as ever. There is a remarkable co-operation here of sensorial with psychic action. It is found that with a little practice the staff can be understood subject to the altered meaning conveyed by the flats or sharps of the signature, as easily as when altogether free from them. This is an interesting illustration of the fact that in the complex conditions of art (as in nature) sometimes a principle, however important generally, and fundamental to a particular process up to a certain point, at that point yields the rôle of governing principle to another. Though our system of notation depends so largely for its clearness on the diagrammatic principle, if that principle had been attempted to be carried further (in order to indicate the intermediate degrees of pitch resulting from the division of the tones of the primary diatonic scale), the use of the staff would obviously have become far more complex

and difficult, instead of remaining as at present almost as simple and easy as before sharps and flats were adopted.

In this account of our system of notation we see how each step arose out of the actual occasion of having to record or indicate a practical effect, and thus was tested and proved by practice—that its development and that of the art itself, were largely synchronous and interdependent. Hence the length of time—nearly a thousand years—involved in its formation.

There is a certain analogy between musical notation and the grammar of language in the fact that in both a *via media* is arrived at between external and inward guidance. In reading a sentence intelligently the relative *position* of words and sentences and the *obvious grammatical relations*, have to be supplemented largely by psychic action that is quite unrepresented.

Some interesting reflections regarding psychic action are suggested if we analyse the combined functions of the staff and the note. Though in the staff, armed with the clef and signature, should there be one, the general idea of the various degrees of a certain scale, is called up, no sound is suggested. Nor of itself

does the note suggest sound; but only time-value. But the *note on the staff* brings sound, and sound of definite pitch and length. It is the necessarily ever clear outward distinction between these two attributes of the note, position and shape—that gives the crown of simplicity to our system.

A LADY PLAYING UPON THE VIRGINALS.
FROM TITLE OF PARTHENIA THE FIRST MUSIC FOR THE VIRGINALS,
PUBLISHED IN ENGLAND IN 1611.

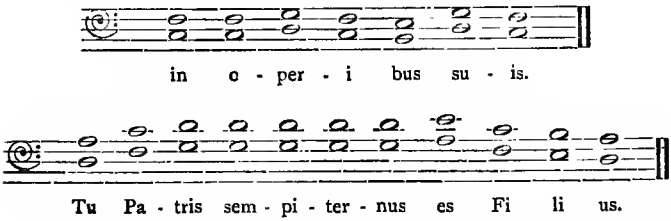
CHAPTER XIII.

ORGANUM: DESCANT: POLYPHONY.

I HAVE remarked that the cultivation of harmonic effect could not proceed far in the absence of some system of notation, and that it is antecedently probable that the two developments necessarily acted and reacted upon one another. As a matter of fact, they marched largely together; signs of both emerge from the darkness at the beginning of the 7th century, and both attain virtually full stature at the beginning of the 18th.

Two departures were involved in the development precursory to Harmony. The first to meet our attention is the effect termed Organum, first described by Hucbald, who died 930. That it was in use in the preceding century is proved by the fact that Scotus Erigena, who died 880, refers to it for the purpose of

familiar illustration. In its simpler form (Parallel Organum) it consists of the addition to the Plain Chant of another *part* constructed by placing a series of notes coinciding with the notes of the Chant, a fourth or a fifth below, as in the following examples:—



I may here observe that though the term Organum, like Counterpoint, is applied to the general effect into which it enters it has (also like Counterpoint) a stricter application. In this application the term Organum refers particularly to the part added below.

When arranged for three voices the Organum was doubled in the octave*; when for four, the Chant also was doubled in the octave.

The definite origin of Organum is unknown. When it was realised that the consonance of the fourth or the fifth, heard isolatedly, had a fuller effect than the

* The part thus produced was called Triplum. Hence the term Treble.

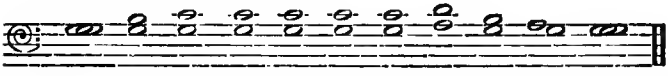
unison, the question might naturally have been asked: why should not a succession of fourths or fifths have also a fuller and better effect than a succession of unisons? Here we strike upon a distinction and a truth; the distinction, namely, between stationary harmony and harmony in motion, and the truth that the sense of harmony cannot be realised fully without movement. Harmony is often understood as the effect of notes in combination; it should be understood as the effect of successive combinations. In stationary harmony, as I have just said, the sense of harmony is only partly realised. Even the theorists of the period of Organum and Descant when they regarded harmonic intervals with reference to their effect in moving parts drew rules which proved useful and led to the true path. Thus Franco classes sixths as discords but admits their use in Descant; and thus Marchetto, of Padua (14th century), says that parts should not ascend or descend in perfect consonances but may in imperfect.

It has been suggested that the rejection of the interval of a third, with its inversion the sixth, in these first attempts at combinative effect, may have been owing to the persistence of the Pythagorian intonation, which, as we have seen, made the major thirds based on the

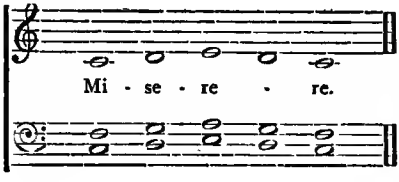
3rd and 6th of the then scale of A minor a comma (or difference of 81 to 80) sharper, and consequently the minor thirds on the 5th and the 1st, a comma flatter, than in the case of the corresponding intervals of the present minor scale. But,—assuming that the organs of the period were tuned according to the Pythagorian intonation,—that the above small difference should have killed in the listener the natural appreciation of thirds and sixths seems doubtful.

Perhaps the simple nomenclature of intervals, as given by the early theorists, contains the true explanation of their rejection of thirds and sixths. In this nomenclature the intervals are ranged in the order of the simplicity of the mathematical relations of their constituent notes. Hence the octave, fifth and fourth represent descending degrees of perfection beginning with the unison. This explanation suggests that Organum was the offspring of acoustical science, or of its domination with academic musicians, which church musicians would probably be at the period of these early attempts at harmonisation. If the foregoing is the true explanation then it might naturally be supposed that with experience in treating the Chant harmonically these sequences of fourths and fifths would

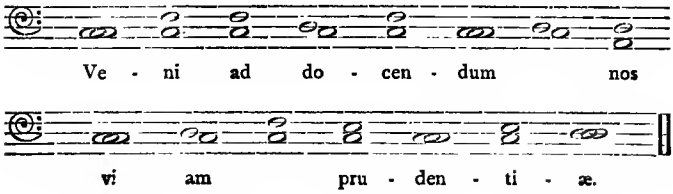
gradually be broken by progressions involving other intervals. This to a certain extent was the case. Thus in Hucbald's time (840-930) as the term "Parallel Organum" applied to the foregoing examples implies, another kind of Organum was in existence in contradistinction to which the above term was used. In this other kind, of which Hucbald gives the example below, the use of seconds and thirds is permitted on condition that two thirds do not succeed one another immediately. But Hucbald permits even this provided the seconds and thirds are only used to render the movement of the fourths more regular.



Then Guido (d. 1050) in the following century objects (on account of their harshness) to united fourths and fifths in an Organum of three parts, as in the following example:



and recommends leaving out the upper part. At the same time he proposes a new method called *Occursus*, from the closeness of the parts as they approach the conclusion of the melody, giving the following example:



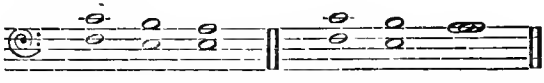
Next Franco (circâ 1047-1083) says, it is better to mix imperfect with perfect concords than to have successions of either.

After Guido and Franco a long list of writers on music contributed each something toward the stock of knowledge on the subject, and suggested improvements. So, generally, what we supposed might naturally occur on the assumption that Organum was largely the offspring of acoustical science does seem to have occurred. Still, looking at the length of time covered by these various modifications (made or suggested) in this form of effect, during which time it more than held its own,*

* There are allusions to organizers in the minstrel laws of Eberhard von Minden (1404), and even in a document of 1516, preserved in Toledo.

we cannot avoid acknowledging that it was a departure of the greatest importance and must in some way have made a peculiar appeal to the musical feeling. The following considerations may perhaps throw some light on this at first sight surprising result.

In the first place Organum increased the amplitude of each sound of the Chant in a way which involved the unwonted effect of *a succession of chords.* Secondly, the effect though generally hard and disjointed, sometimes approached harmony. For instance, in the case of the second example, p. 226, if a fourth instead of a fifth had been added to the last note of the Chant, or better if it had ended with a unison; as shown in the following examples, the concluding part of the effect might have been realised as striking in the highest degree as portion of a first experience in moving harmony. As the musical reader will at once perceive, that impression of the key-note which is suggested at the penultimate chord, is in the original destroyed by the addition of D to the last note.



Fi - li - us. Fi - li - us.

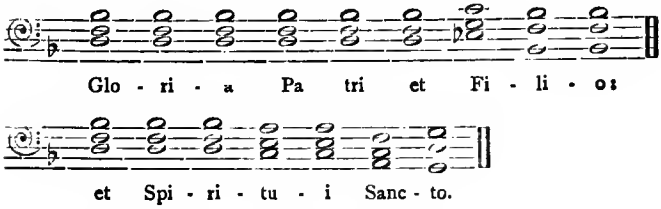
In the third place Organum accentuated the principle of the simultaneous enunciation of different sounds.

We shall see as we proceed that it also gave a broader basis for the Descant to move from and return to.

It was probably owing to these various circumstances that notwithstanding its primal crudeness Organum prevailed for at least three centuries—from about the beginning of the 9th to about the end of the 11th, and as modified in the effect called Faux Bourdon persisted as late as the 16th century. I may here remark parenthetically that if acoustical science was (as I have suggested) largely responsible for the combinations used in Organum, it is to that circumstance that much of the harsh effect of the latter should be attributed. On this assumption those expressions of repugnance on the part of theorists, who have regarded it as a wholly musical prompting, lose their point. This reminds us that (as modern practice shows) all theorists have been at fault who have disallowed sequences of naked consonances under all circumstances.

On the surface it would be difficult to avoid the assumption that Faux Bourdon, which appears in the 14th century, descended lineally from Organum, as structurally it is simply Organum with the sixth

included in its intervals. The following example, copied from a manuscript at Rome, is given by the Rev. T. Helmore.



EXAMPLE OF FAUX BOURDON: 15TH CENTURY.

If Faux Bourdon branched out of the Descant the latter must in the process have quite lost its distinguishing principle, namely, melodic independence of parts, and become invested with that of Organum, in which the rôle of the subordinate part or parts is simply to amplify the outline of the melody. But the doctrine of the acoustical origin of Organum suggests the simple and natural explanation of Faux Bourdon, that thirds and sixths (which were well known at the beginning of Organum) having been at first rejected in the construction of the latter on the ground that they were imperfect consonances, with experience in their use became admitted.

I referred to Organum as having accentuated the

principle of simultaneous sounds. Now Faux Bourdon may certainly be regarded as the crude pattern and type of a form of harmonic effect in which the parts, marching with the melody or principal part, serve to broaden and deepen it though they in themselves have no melodic value—such an effect, for instance, as a Choral in plain harmony. It must not be assumed, however, that Faux Bourdon developed directly into such a kind of effect as Plain Harmony, which could only have arisen after certain experiences in melody, harmony and rhythm, that to become unfolded themselves demanded a long course of effort taking its rise in another and different kind of departure, that is, in Descant; in other words, after the rise and development of Polyphony. During all this time, nevertheless, Faux Bourdon still persisted, a standing evidence of its special type of effect, ready to assimilate qualities which it could not itself have unfolded. That it was held in equal honour in England and France in the 15th century appears from treatises by Gulillmus Monachus in the library of St. Mark, Venice.

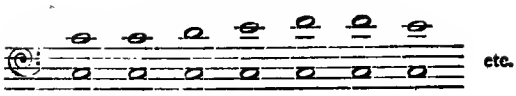
I have pointed out that every progression contained in Organum is not equally repugnant even to our taste.

The examples, moreover, that have come down to us are so few and meagre that we can form no positive conclusion of the effect to which a broader survey even of manuscripts would point; but assuming it to have been largely of the character indicated by the examples we possess, there might have been felt in it a certain propriety by the early Christian congregations. I have already suggested that as a first experience of moving harmony in composition, its effect might have been very striking if not profound. But besides its purely musical effect, its hollow resonance, the absence of human articulateness, the shifting horizon caused by its undefined tonality, were probably all felt as effects in keeping with the order of the ideas which they attended —ideas vague but impressive, relating to a state of things involving the absence of earthly conditions.

At the opening of this chapter I said that two departures were involved in the development precursory to Harmony, of which Organum was one. The other was that effect I have recently referred to under the term Descant, which was a different form of departure from Organum and which involved a different principle. The impulse which prompted Organum was

harmonic, that which prompted Descant was melodic. Practically, the one simply initiated Harmony, the other led to its consummation. The principle of Organum, as I have said more than once, is the amplification of the melody by the supposition of a series of accordant notes marching with it but having no melodic value of their own. The principle of Descant is independence,—both melodic and rhythmic,—of parts.

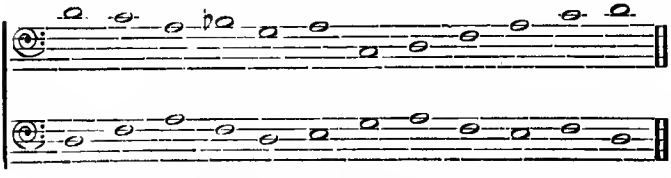
We have no positive knowledge of the origin of Descant. In the light of the principle so largely visible in this work the probability would be that it arose in the normal course of art action. It is far from improbable that a rudimentary exemplification came about accidentally. It might, for instance, have happened in the course of the Church practice that whilst one singer held on a note another passed from it, moving up or down by degrees. This is not inconsistent with the literal meaning of the word Descant. Such a form of departure as this occurs in the following example from Hucbald which might be regarded as Descant based upon Organum. In the consonance of the octave with which this example begins we observe that broader basis for departure and return to which I have referred as one of the constructive attributes of Organum.



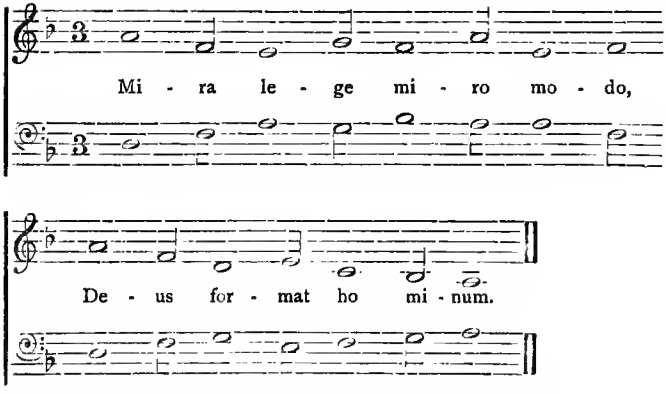
The Descant was known in France and Flanders towards the end of the 11th century. One form of development which it is said to have taken consisted of two airs selected in virtue of their different character and so arranged (by small modifications of pitch and rhythm) as to produce when performed simultaneously a fairly accordant effect. I have said that the definite origin of Descant is uncertain. The free way in which it is said to have been used in the secular field would seem to point to its having originated in that field. One thing, musical art throughout perhaps the main portion of its progress has at any particular time been in some respects more advanced in the secular field than in the sacred. To one mass a composer would write probably a dozen or more small secular works permitting of greater freedom of form and expression. Hence quicker growth in the smaller details of construction, and all that variety and piquancy of expression resulting from closeness to life—from the feeling its varying pulse. But in this connection we must not lose sight of the fact that, as we have seen, favouring circumstances

of a different character attached to the sacred field, as, for instance, the permanent choir, regular practice, the heritage of the plain song, the conservation of past forms and styles, and, last and greatest, the spirit! embracing every beauty of earthly, combined with the steadfast morale and eternal mystery of religious, feeling. To these latter circumstances is probably largely due that massive development which as we shall see Descant, whether or not it originated in the Church atmosphere, in its expansion of Polyphony attained in that atmosphere.

Applied to the melodies of the Church the principle of Polyphony is far less pronounced than it is applied in the way recently described where the parts are rendered as different as possible—in fact where it may be said to be exaggerated. The following specimens of early polyphony are taken from W. S. Rockstro's able article in Grove's Dictionary



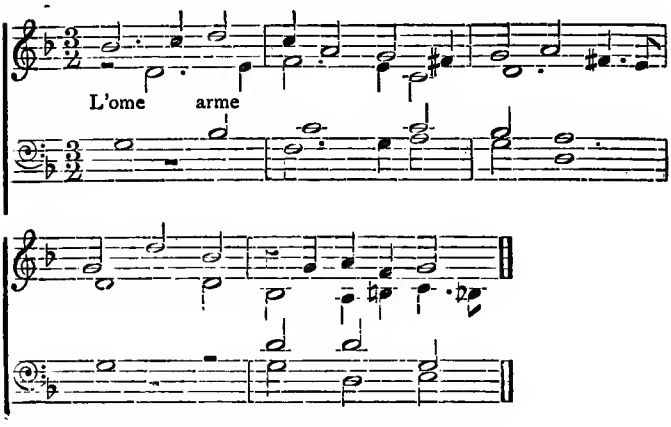
FROM AMBROSIAN COLLECTION AT MILAN.
(Eleventh or Twelfth Century).



FROM A MS. IN THE PARIS LIBRARY.
(Fourteenth Century).

It is scarcely possible to comment with any confidence on these records of old effects. It is difficult to be quite sure that we interpret them rightly. For instance, the melodic value of the parts in the above examples is so slight that in neither can we realise them very forcibly as examples of independent melodies. W. S. Rockstro, however, whose opinion is entitled to the greatest weight, asserts that the two parts in the case of each of the above examples are independent melodies. The following points may be noticed. In neither example are the parts rhythmically independent whilst in both the influence of Organum is noticeable in the strict

confinement of the consonances to the octave, fifth and fourth. At the same time the second example (as would be likely from the long time between them), exhibits great advance. Whereas in the first there are as many as six intervals of a fourth (of which three are arrived at in similar motion), the second consists of octaves and fifths, with one third, all but one of these intervals being arrived at in contrary motion and that one in oblique motion.



DUFAY, D. 1432.

The foregoing example shows an immense leap in achievement. It is a short extract from a mass composed by Dufay (appointed to the papal choir, 1380, died 1432) upon a celebrated song entitled

"L'Homme Armée." In order to render its reading easier I have transcribed it from the original time of three semibreves to three minims in a bar.

Now the reader who examines the above attentively will observe (1), that the general form of the top part contrasts perceptibly in the opening bars with that of the *subject*, which appears in the tenor; (2), that the parts do not all begin together but that the alto comes in a beat and the bass a bar later than the other parts; (3), that the alto and bass as they enter respectively *imitate* the opening notes of the top part. This effect of Imitation, as I pointed out in the previous chapter in speaking of the early Flemish composers, was incorporated in the serious works of Dufay's successors. That it was, however, in evidence one hundred and fifty years before the rise of the Flemish school is evident by the Round, "Sumer is icumen in." But that it was initiated in the practice of the Canon is doubtful. It may have been. On the other hand the style of writing represented in the example from Dufay may be itself a tradition extending further backward than the Canon. The tendency to imitate seems inherent in the musical instinct. We can scarcely conceive musical art without Imitation. For one thing: all that graphicness which it

gives to multitudinous utterance would be lost. But apart from incidental expression Imitation influenced musical development organically. How it did so may be thus briefly explained. In its strict use, as in the Canon, the various parts involve the same subject yet at every point where they synchronise there is necessarily more or less marked independence. Thus whilst preserving the freedom of Descant between the parts it drew them into unity—gave them, so to say, a common purpose and *equal importance.* Hence arose that great style of choral writing in which contrast and every variety of passing effect is united in one general expression.

To summarise the principal points in this chapter. In Organum a type of effect rises up for which contingent circumstances are not altogether ripe yet which in the fuller and subtler play of circumstance is seen to have had its reason. The application of the perfect consonance to the Plain Chant with all its resulting hardness and tendency to, as it were, dislocate the melodic intention and destroy the dim feeling of the key-note, did give the unwonted experience of crude harmonic effect, and put the principle of the simultaneous

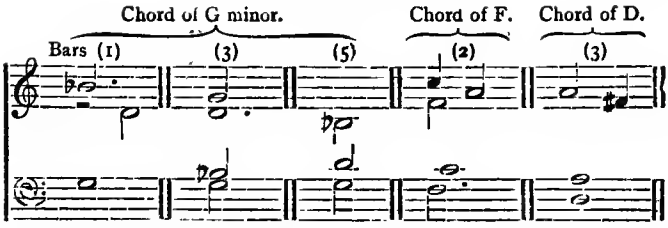
enunciation of accordant sounds in distinct evidence. Subsequently, in Faux Bourdon the form of Plain Harmony became, so to speak, blocked out. This was as far towards harmony as in this path could then be got. There was as yet no way of so applying existing combinations as to render them not only coherent but penetrative with that full influence of harmony—in which there is coalescence of harmonic and melodic beauty. How the power of thus applying chords became acquired I shall endeavour to show in the following chapter. Curious as it seems, the land where the perfect beauty of harmony was destined to be found was led to by the melodic impulse in the form of Descant—a melodic departure from the song while the song went on. As we shall see, it was in the ensuing enweavement—in the *rencontres* of moving parts—that the elements of harmonic beauty became revealed and thus the conditions under which it appears, discovered. The rise of Imitation in the course of the above enweavement and its influence upon the development of part-writing I have treated so recently that I need here only name it as not the least important of the remarkable series of developments I have been describing.

CHAPTER XIV.

HARMONY.

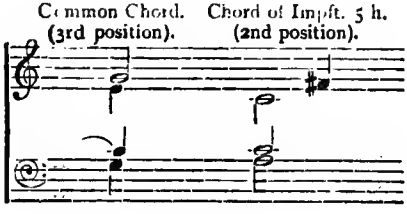
NOW let us observe how the general enweavement of themes described in the last chapter led to the special art of harmony. Take our extract from Dufay (p. 240). Besides the common chord of G minor (at the opening of the first, third and fifth bars) and of F and D major (of which the former occurs at the beginning of bar two and the latter at the third beat of bar three) as shown in the examples following.

We have at the latter half of the second beat of bar two the chord of C in the third position passing to that important and expressive chord, the chord of the imperfect fifth, as shown on next page:



EXAMPLES OF THE COMMON CHORD IN THE FIRST POSITION.*

DUFAY (1350-1432).

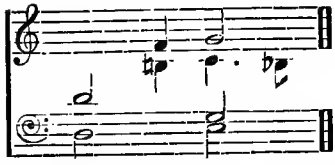


DUFAY.

Then towards the latter part of bar five we have the chord of the imperfect fifth in the key of C, also in the second position, passing to the common chord of C in the second position, and this passing to another chord of the imperfect fifth (on E); as shown in the following example:

* For convenience when the fundamental note of a chord forms the bass I refer to that chord as being in the 1st position; and when the second and third notes form the bass, to such chords being respectively in the 2nd and 3rd positions.

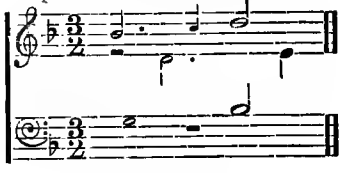
Bar 5 (Latter half).



DUFAY.

Then at the end of bar one is the chord of the ninth on C (without root) or to use more rational nomenclature, of the secondary seventh on E.

Chord of Ninth.
(Involved by the large notes).

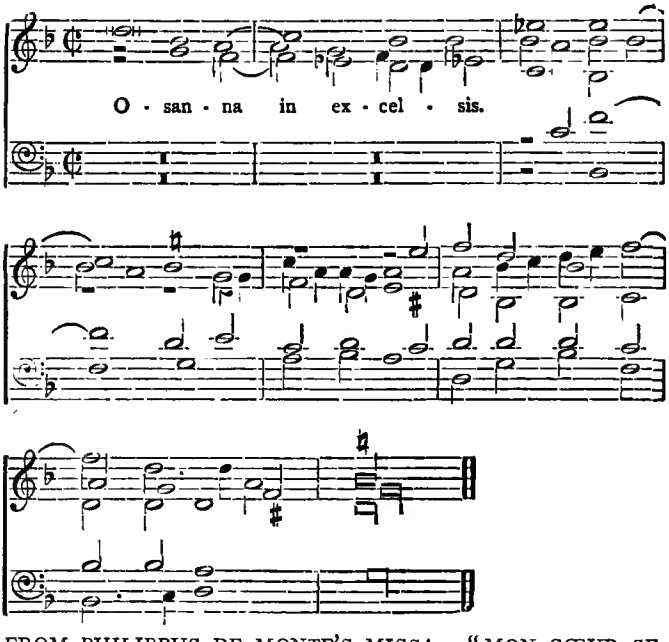


DUFAY.

In this short extract then of only five bars we have not only all these various combinations in themselves but applied—they are formed in the *recontres of moving parts;* thus we have the effect of the constituent notes both in their melodic and harmonic rôles, with the result that each combination unfolds a power which isolated it could not possibly betray.

The next great development on the path to modern music which emerges is *prepared harmonic effect* due

to increased experience of passing combinations. The short extract from the Flemish School which I have given involves, as we have seen, several combinations and progressions betraying æsthetic effect in various degrees. But in the following extract this special æsthetic effect is not only more marked, but there seems a seeking to bring it about in the preparation of the numerous suspensions.

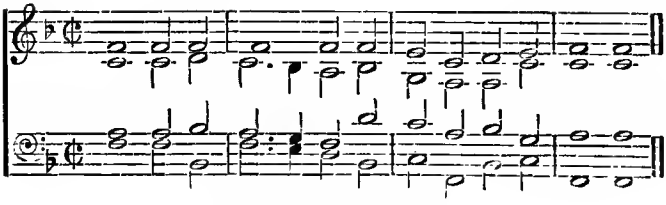


FROM PHILIPPUS DE MONTE'S MISSA. "MON CŒUR SE RECOMMANDE A VOUS."—1521.

In this gradual unfolding of definite harmonic progressions we see the first signs of an influence destined to deepen and enhance inordinately the power of melody or melodic design, as shown in the amalgamation of the effects of a harmonic and melodic progression.

The development I am describing was reflected in the secular field. Flemish composers of masses and motets were in the habit of selecting their themes from popular airs as well as from the Church Melodies. Dufay's mass, "L'homme armé," is an instance. But they were also in the habit of developing the themes of popular ditties into chansons for three or four voices. Thus as definite chords became unfolded they became applied to popular songs of various character. Hence arose the Volkslied and harmonised Choral in Germany. At the same time definite harmonic progression entered into the Madrigal in Italy.

The normal form of the Madrigal was that of the Canon but towards the middle of the 16th century it is found in plain harmony, witness the well-known "Quando ritrovo" of Festa (1517-1545) printed in Arcadelt's third book of Madrigals (Venice):—



FESTA (1490)-1545.

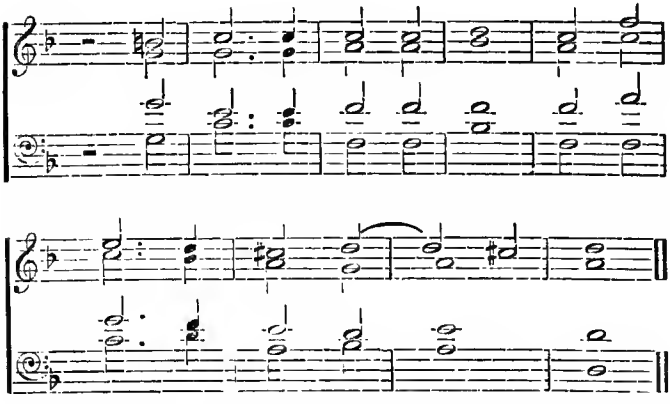
As I have implied, the form of the Madrigal was partly due to the contact of the Flemish and Italian Schools. Dufay was appointed to the Papal Choir in 1380 and Adriano Willart (born Bruges, 1480), the founder of the Venetian School was a pupil of Okeghem and Josquin des Près. The spirit of Italy has always been peculiarly quickening when coming in contact with important developments elsewhere: witness the massive expression it gives to the fugal form, and the sweet articulateness to the melody, in Handel; also its influence upon pre-romantic German Opera, and even upon the Symphonies of Haydn, Mozart and Beethoven, in many of the themes of which an ancient Italian charm and grace linger. The soil of Italy has always been rich in yielding melodic beauty and simple majesty of contour. Marchetto of Padua who lived in the 13th century shows that secular music was much cultivated

in his time. As I have expressed before it is difficult not to connect the distinct character of the musical spirit of Italy with the fact that it was for so long a period a central area over which flowed the melodic streams of the ancient world.

When definite chords first marched with melody, melody was necessarily impressed with greatly increased massiveness, but the very use of chords tended frequently to render it stiff and cold. The art had to be much further exercised and its effects transmitted from mind to mind before harmonic progressions, having in themselves a certain æsthetic effect, were so introduced as to invest melody with a stronger coherence and deeper expression. Although, as we have seen, composers were frequently moved by æsthetic effects attaching to certain progressions and combinations, such of these as had been unfolded up to Festa, Arcadelt and Palestrina had not then yielded a tithe of the effect that it was in them to yield. Notwithstanding that the principal combinations had emerged, only their effects in certain relations had been discovered.

Much of the effect of stiffness and coldness which

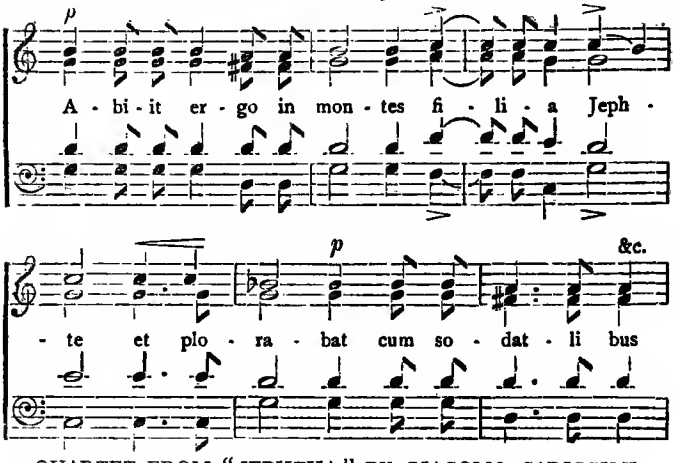
compositions of the latter half of the sixteenth century have is due to want of greater freedom in the connection of the combinations. For instance, in the following passage from Palestrina, the bass consists (except in two cases) of the fundamental notes of the chords. The two exceptions are the chord of B-flat at the end of the sixth bar and the chord of G-minor at the latter half of the seventh bar.



PALESTRINA. (B. BETWEEN 1515 AND 1529; D. 1594.)

The same tendency is observable in the plain harmony of Festa and Carissimi. In the recent example from the former and in the following from the latter the bass in the case of every chord is the fundamental

note. I should add that in other works of Carissimi the chords are used more freely.

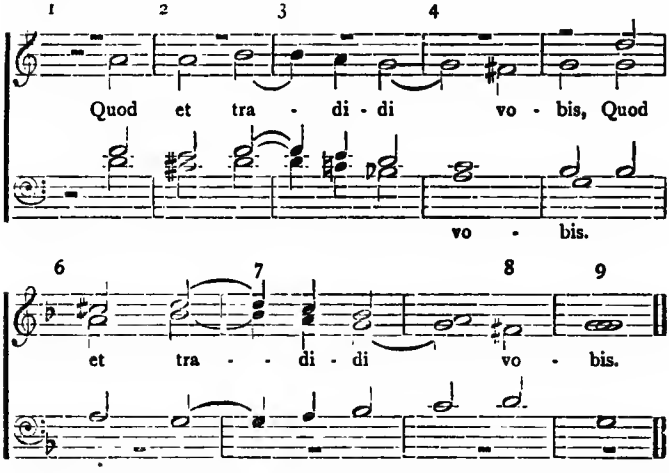


QUARTET FROM "JEPHTHA" BY GIACOMO CARISSIMI.
1582 (SPIRIDIONE) 1604 (PITONI)—1674.

But more than mere stiffness jars upon our taste in this early use of definite chords. For instance, a feeling as of passing too suddenly to a removed effect is produced in the example from Palestrina at the chord of B-flat in the fourth bar and of A in the seventh bar. These effects, due to a too sudden shifting of the key-note, were not in all probability felt at the time (in the new experience of applied chords) as we feel them—that power of modulation by means of which we soften and enhance such progressions,

having also demanded further general musical development.

Further, let it be particularly noted that progress in the effective conduct of tonality was not a question of harmony alone but, as the next two examples will show, depended upon the application of harmony in connection with melody and rhythm which principles of musical effect as well as harmony the composers of this period were working steadily to develop.

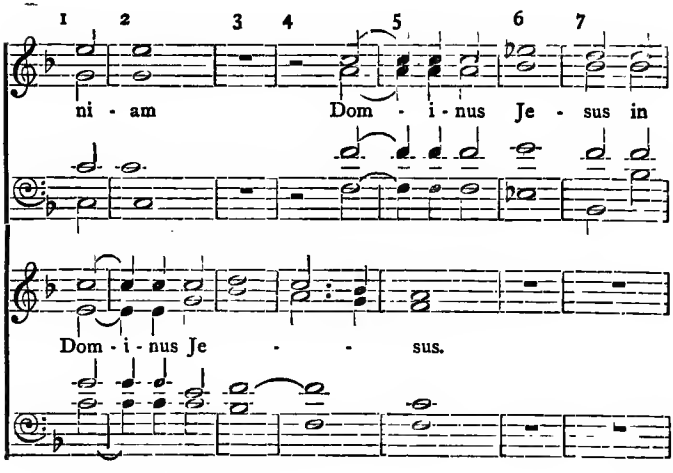


"SI CANTA GIOBEDI SANTO ALLA MESSA." PALESTRINA.

Some perception of the influence of melodic and rhythmic symmetry upon tonality is afforded by observing how the abrupt progression in the sixth bar of

the foregoing extract is modified by the fact that it is the exact counterpart, rhythmically and melodically, of a portion of the general design which occurs in the second bar.

Again, in the following extract from the same chorus the abrupt progression from the fifth to the sixth bars is modified by being the counterpart, rhythmically and melodically, of that step in the general design which occurs between the second and third bars:—



In the meantime the general harmonic advance made up to this point not only influenced plain melody in both sacred and secular art but reacted upon poly-

phony. Definite harmonic progression, which in Italy became incorporated in the madrigal, in Germany entered into the fugue. German organists and choir-masters, without abandoning the polyphonic style, were moved by the clearer feeling for harmony, with the result that part-writing entered upon a further and higher development. Imitation and the enweavement of parts could be all the more elaborate when involving definite harmonic progressions which amid increased complexity suggested fundamental order.

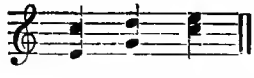
I just now referred to a progression in the example from Palestrina, which gives the feeling of passing too suddenly to a removed effect, and mentioned the structural circumstance attending it as being a sudden shifting of the key-note. To this kind of progression occurring frequently is mainly due that impression of incoherence which the harmonic constructions of this period tend so largely to give. It has been the custom with musical writers to regard this unsettled effect as having been inevitable through want of knowledge of a particular chord (that of the dominant seventh) which, as it embraces the fourth, fifth and seventh degrees of the scale the simultaneous presence of which is only compatible with one key, impresses un-

equivocally a decided sense of the key-note whenever it is heard. But this was not the case. The unsettled effect I refer to was certainly inevitable but only from want of fuller experience in the use of combinations already existing, for with this fuller experience it largely disappeared. As a language in its earlier period is always found less clear than at a later period when the thoughts expressed being better arranged the various sentences and parts of sentences follow in a more logical order, so it has been in the use of harmony, in which clearness was led to by more ordered and versatile expression. I may add that to this improved expression increased knowledge of chords in their different positions largely contributed.

I may here remark that when the various positions (or inversions) of a chord are referred to by theorists it should be understood that this is simply a convenient way of classifying combinations made up of similar elements. For instance, the expressions, first, second and third positions are understood as all applying to a single chord whose fundamental form is that general arrangement of the constituent notes to which the term first position applies. As the notes in each arrangement involve the same degrees of the scale this mode of

classifying simply the different general groupings of those degrees is efficient. But the connection of the groupings in this classification must not be regarded as expressing their æsthetic relations to one another. As portions of musical effect the different positions of chords are different things.

In the case also of those combinations which are termed incomplete chords it should be distinctly borne in mind that the understood full chord and what is regarded as its fragment are assumed to be thus connected for the purpose of classification. In some cases when figuring in actual music the two, the full chord and its fragment, might no doubt be interchanged with little detriment to the effect; but in highly artistic composition to interchange them would be to ruin the effect. A complete chord and the same chord incomplete (to adopt the usual terminology) are as elements of æsthetic effect different things. For example, the following progression often occurs in music,



and the musical grammarian would regard each combination as an incomplete chord; but the composer re-

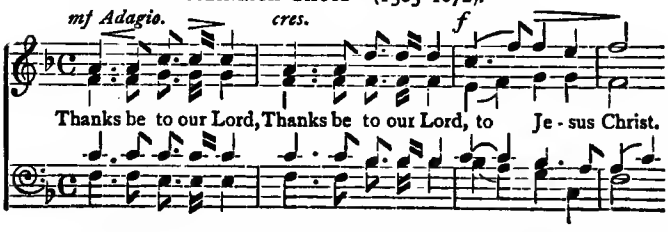
gards them as quite different effects from those of the complete chords which the grammarian has in mind and with nothing incomplete about them.

Of course any effect may be presented in an incomplete or sketchy form, as when the key-note with its fifth or its third only, does duty for the common chord, or a portion of the chord of the dominant seventh for the complete chord. It, however, does not follow from this that the fuller are absolutely fundamental forms. They may be fundamental in relation to the lesser forms in these particular cases—in which the spirit of the greater effects breathes in the lesser. But in other circumstances the latter forms may give an impression of completeness and breathe of no effect which is not fully expressed.

The historical unfolding of these various harmonic formations bears out this doctrine. To speak in the language of the musical grammarian: First come lineaments of chords, then complete chords so connected as to play upon certain positions, then gradually fresh positions. If we compare the examples from Festa and Palestrina with the following extract from the "Four passions," by Heinrich Schütz (1585-1672) we observe that whereas in the former two ex-

amples the bass (as already remarked) consists almost entirely of the fundamental notes of the chords involved, in the example from Schütz, the various notes of the chords alternate freely to form the bass.*

HEINRICH SHÜTZ (1585–1672).



Now the force that this historical reference gives to the view that what are classified as different positions and different portions of chords are æsthetically different things lies in its exhibition of the fact that one of these developments being accomplished time and originating energy intervene before another occurs, as in the case of every new æsthetical effect.

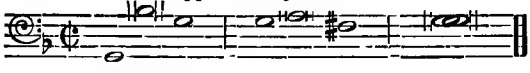
To resume the consideration of the influence of the chord of the dominant seventh: this chord came in certainly as a last and deciding factor of clear tonality,

* This advance is far from representative of the general rate of progress in music. Special circumstances (among which was the earlier development of organ playing in Germany) had in this case hastened that progress.

but it was simply the more complete expression of an influence that had long been forming, whilst the chord which took the leading part in the long progress to clear tonality was that of the imperfect fifth, which contains all but one of the notes of the dominant seventh.

Like so many other important developments to which I have referred the chord of the dominant seventh did not appear suddenly; it so to speak dawned gradually over the unfolding world of music, influencing it almost from the beginning, and working homogeneously in the general development of the art. Thus an important operative part of it, embracing the leading note and supertonic, occurs in our extract from Busnois (1445-1480) as shown in the middle bar of the following example.

BUSNOIS.
(B. supposed 1445; D. 1480).



Then in our extract from Dufay (see the second and third examples in this chapter) we have this part of the chord (the leading note and supertonic) in combination with the fourth of the scale, forming the chord of the imperfect fifth of which, as I have said, the structure is identical with that of the combination involved

by the three upper notes of the chord of the dominant seventh, as illustrated below.

The reader will observe that in the above examples from Dufay, the chord of the imperfect fifth forms three times: on F-sharp, on B-natural and on E. In the following illustration it appears on the last note.

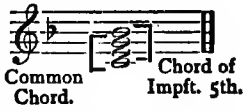
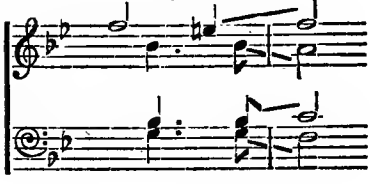


DIAGRAM SHOWING THE STRUCTURAL ELEMENTS WHICH THE CHORD OF THE DOMINANT SEVENTH HAS IN COMMON WITH THE CHORD OF THE IMPERFECT FIFTH, AND WITH THE COMMON CHORD ON THE FIFTH DEGREE OF THE SCALE.

The reader will observe that the chord of the imperfect fifth in the second bar of our extract from Dufay passes to the minor chord on the tonic. Now, concerning this progression it is interesting to notice that, waiving the circumstance of its passing to a minor tonic, if the movement of the inner parts be interchanged, it is precisely similar to one that Handel employs so frequently in order to emphasise a passing period, as shown in the following example.

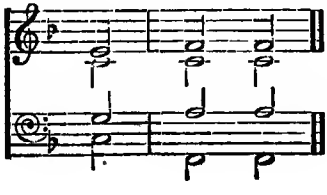
DUFAY.
Motion of inner parts interchanged.

HANDEL (1585 or 84–1759).

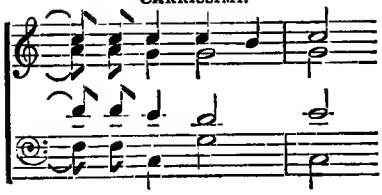


To proceed—in the examples from Festa and Carissimi we find the leading note and supertonic (inverted) in combination with the fifth of the scale, forming really the common chord of the dominant but used as a half cadence or cadence of a section of the piece, thus:

FESTA.



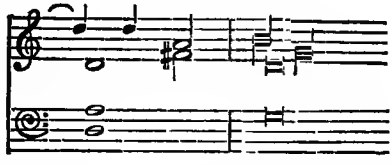
CARRISSIMI.



In citing this example I have passed to the Italian School which at this time as the reader is aware had much in common with the Flemish.

Returning to the latter school we find some two or three decades later the leading note and supertonic in their natural position also combined with the fifth of the scale and used as a full cadence, as at the termination of the example from Philippus de Monte.

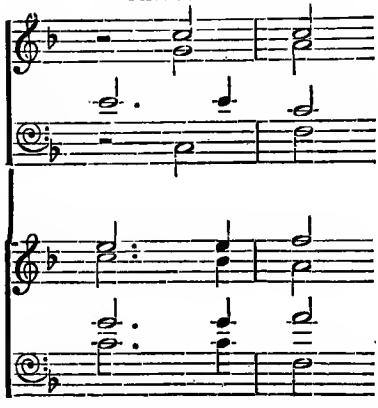
P. DE MONTI.



In the course of these various examples then we find the leading note and supertonic functioning first as cadence alone, then as a passing cadence—in the latter capacity frequently in combination with the fourth of the scale, forming the chord of the imperfect fifth;

then in combination with the fifth of the scale both as a passing and full cadence. Now, in the following extract from the double chorus "Si Canta il Gioedi Santo alla Messa" of Palestrina (who was contemporaneous with P. De Monte (1521) we find both these effects combined.

PALESTRINA.



As I have shown, the penultimate combination in the above extract might be regarded as the chord of the imperfect fifth with the fifth degree of the scale added, or as the common chord on this latter degree with the fourth degree of the scale added.

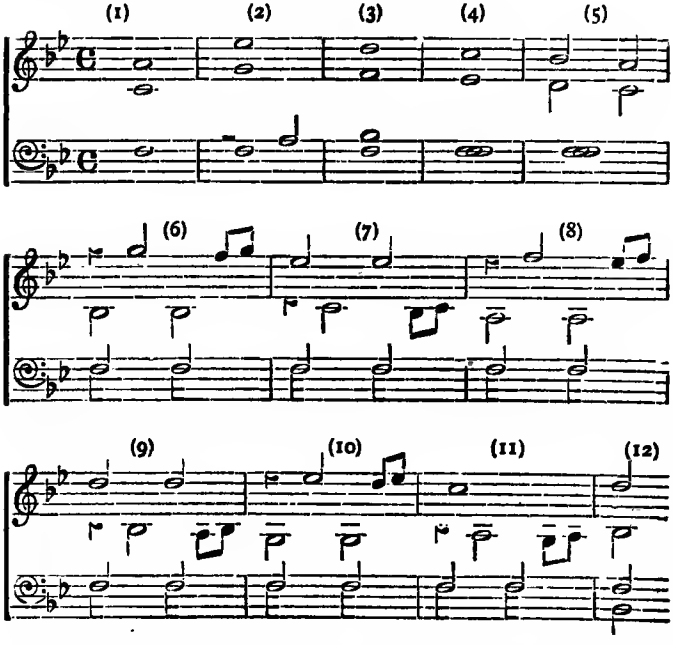
It is therefore not surprising that both chords having been for some time used separately, the fact should

sooner or later have been discovered that they could be used in combination.

Thus, starting with the leading note and supertonic, the chord of the dominant seventh, unfolded in portions at the hands of various composers during a period extending from at latest about the middle of the 15th to towards the end of the 16th century. It does not, however, follow that it did not also unfold in a way somewhat different from that I have described and at some other point of musical activity, which has always covered such a large area—embraced so many countries—that development has been far from regular. An effect which comes into use at a certain period may have been long anticipated in some removed region of musical life. For instance, in the following extract from Jean Mouton, a Frenchman, born in 1461, the effect of the seventh of the chord I am treating of occurs in various ways. This example is extremely instructive, as showing how harmonic effect is contributed to by the melodic impulse. Thus in bar 2 the seventh from the dominant of the scale is prompted purely by melodic feeling; in bar 4 it comes in so to speak mechanically in the course of accompanying the melody by sixths below; but in

bars 7 and 8 it occurs again as part of the melodic design. It will also be observed that in bars 2 and 6 the combination of the dominant and its ninth occurs—in the one case in preserving the design of sixths in the upper parts, in the other through pure melodic prompting; also that at bar 10 the imitation of the melody gives rise to the discord of the second.

JEAN MOUTON (born 1461).



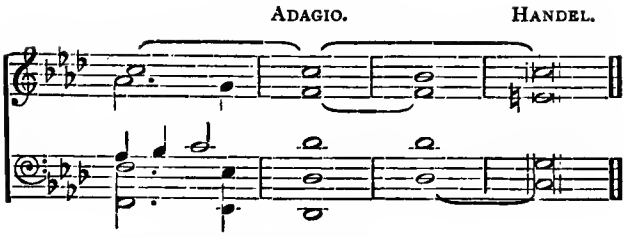
EXAMPLES OF UNPREPARED SEVENTHS AND NINTHS. PERIOD ABOUT END OF 1400, OR BEGINNING OF 1500.

Several writers on music I have noticed seem, in reference to the beginning of the use of the dominant seventh, to attach much importance to the circumstances under which it appears—that is as to whether it is prepared or not, or intentional or not. The reason would seem to be that if the effect is unprepared yet not due to accident it argues a clearer exercise of invention than if it is prepared. We have seen, looking at the general harmonic unfolding up to this point, that there is a tendency for the various intervals of all chords to be prepared; thus there would have been an antecedent probability of the interval of the minor seventh on the dominant first appearing in this way, that is to say, being led to in the general harmonic construction, as in the case of the example from Palestrina. The important question for the philosophical student of musical history to me seems to be: does the distinctive character of the various intervals of the chord in question, breathe in the combination however it may come about?

The reader is aware that the mediæval modes became gradually metamorphosed and digested into the major and minor modes. In this

process the chord of the dominant seventh may have been in some degree a factor. Helmholtz points out that the use of the leading note led largely to the coalescence of the old into the new system. We have seen that the effect of the dominant seventh as a cadence began to breathe in the combination of the leading note and supertonic (as in the example from Busnois). Now as the effect of the chord developed by its also taking in the fourth and fifth degrees of the scale, whenever this chord was used all scope for difference of character in the same degrees became necessarily confined to the third and sixth degrees. This harmonises with the fact that it is the character of the interval involved by the *third* and *sixth* degrees of the scale which differentiates the major and minor modes. The chord of the dominant seventh may thus have helped to bring this metamorphosis and digest of the various modes about.

I may here refer to a progression which Helmholtz regards as embraced by neither our major nor minor mode, but as an unassimilated remnant of one of the old ecclesiastical modes. This progression is that of the descending leading note, as in the following passage from Handel's chorus "And with His Stripes."



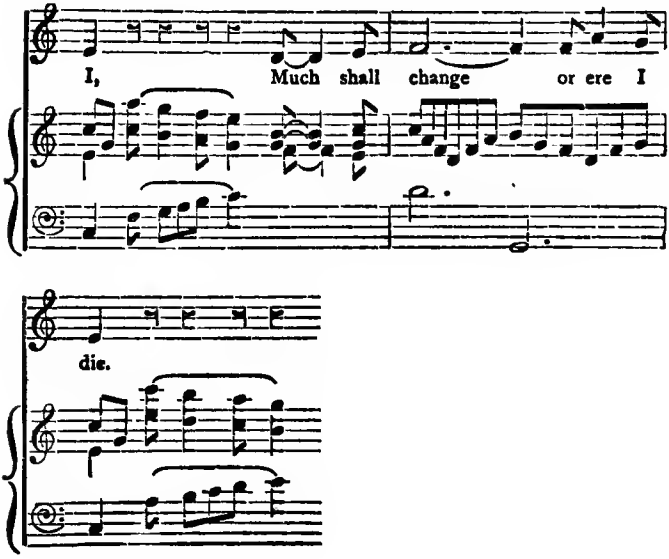
To me Helmholtz's contention that the true tonic of this passage is C does not seem to hold, as the last chord is not felt as final but as leading to the next chorus, which begins with the chord of F. But assuming the keynote to be C the descending semitone might be explained as involving one of those half-tone intervals, which in the view of our system that I have before explained, lead up or down, from every degree of the scale, forming in the case of every scale a borderland of chromatic effect. The reader is aware how largely modern music depends upon effects, termed chromatic, that are neither contained in the scale from which they are, so to speak, projected, nor realised as belonging to a new scale, yet which, as I have illustrated in a former article, often constitute the salient features—the very eye and centre of expression—of the phrases in which they appear. Now if the notes which compose our system of overlapping scales are

considered to have only one regular capacity, namely, that in which they are the essential notes of scales, then the notes composing the elements of such chromatic effects have no definite place in our system. But if the notes which at the distance of a semitone hedge in each note of every major and minor scale are considered to possess two regular capacities, in one of which they are definite degrees, in the other, elements of a borderland of sound available for chromatic effect, then the elements of the effects to which I allude have their allotted place in our system.

My exposition of the development of the chord of the dominant seventh and its effects, thus far, then, goes to show that though these effects played an important part in the production of clear tonality as they unfolded, the influence of the chord taken as a whole upon that result has been very greatly exaggerated. As I have said, clear tonality resulted from greater freedom and facility in the use of means of expression already in existence—such means of expression, for instance, as the use of common chords in their various positions in connection with rhythmic design—in illustration of which I pointed out in an extract from

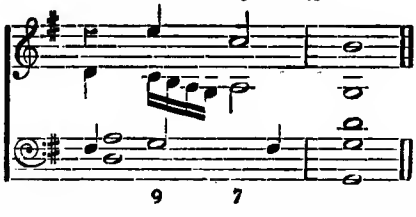
Palestrina how abrupt harmonic progressions may be modified in the conduct of the melodic design.

It is in virtue of another power than simply conducing to clearness that the influence of this chord has been so great. Commingled with that influence is a remarkable æsthetic power. To a considerable extent it is true that in æsthetic power one chord is neither before nor after another. It is the position of a chord in the musical design which largely determines its influence. For instance, the generally unassertive chord on the third of the scale produces at the end of the following extract a certain quaint effect.



But the chord of the dominant seventh is exceptional as having a certain *inherent* æsthetic power. In the following extract we have the primitive breathing of a certain use of this chord which use was destined to take its place as one of the few stereotyped structural features of musical expression, in virtue of its peculiar inherent beauty. W. S. Rockstro gives it as an early example of the chord, with the seventh "unprepared." It is obvious, however, that in this example both the ninth and the seventh are led to by melodic prompting in connection with the harmony of the fifth of the scale. Moreover, the clearness with which the whole is laid out—the parenthetical harmony to the ninth and the enhancement of the effect by the suspension of the leading note—seems to suggest that this is not the first appearance of the chord in this famous rôle.

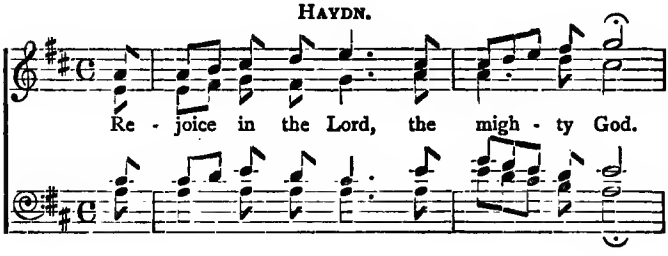
MONTEVERDE (1568–1643).



In the following example the reader will observe

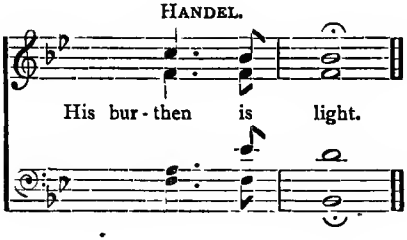
that the effect of the passage centres upon the inherent æsthetic power of the chord of the dominant seventh and at last dwells upon it.

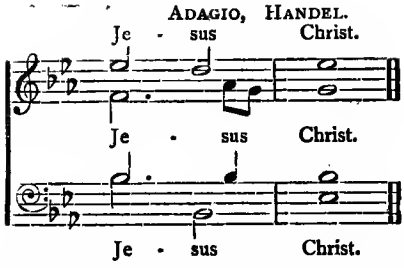
HAYDN.



Again in the third "Help, Lord," at the opening of the first chorus in "Elijah" its special power stands out in strong relief. Taking the form of the perfect cadence it is used as a passing effect. That Handel was conscious of an inherent expression due to the seventh in this chord is shown in the following cases, in the first of which the tenor, and in the second the alto part, gives a peculiar pathos to the close.

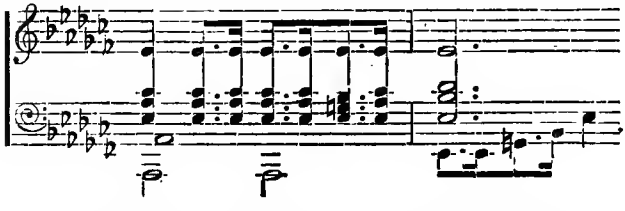
HANDEL.





An interesting detail in the æsthetic capacity of this chord is the following. It relates to that species of effect which is produced by the motion of a part or parts against a holding note. When in this kind of effect the holding note is the fundamental note of the dominant seventh, we have (in virtue largely of the inversion of the minor seventh) an expression peculiarly searching yet perfectly smooth, as in the following passage.

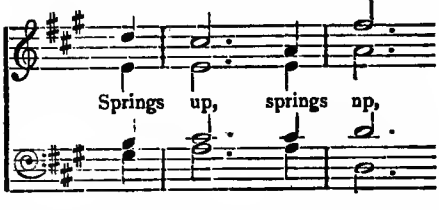
Extract from the FUNERAL MARCH in BEETHOVEN'S SONATA, OP. 26.



I have referred to the necessity of movement for harmonic effect to be fully realised. It perhaps flows

out of this principle that the ineffably beautiful, ineffably moving, touches of harmony only occur in connection with fine melody. Thus it is probably due largely to the inspiration of new melody that the remarkable ascent in the power of harmony which characterises the post-Haydn epoch in music has come about. Whether altogether on this principle or partly, as in the case of the chord of the dominant seventh, in virtue of inherent power; two other combinations were destined to stand out in their capacity under certain circumstances for unfolding inordinate æsthetic effect; namely, the chord of the subdominant and the second inversion of the common chord. This exceptional power is more particularly shown in their use as climaxes. The following extract illustrates the use of the subdominant as a climax.

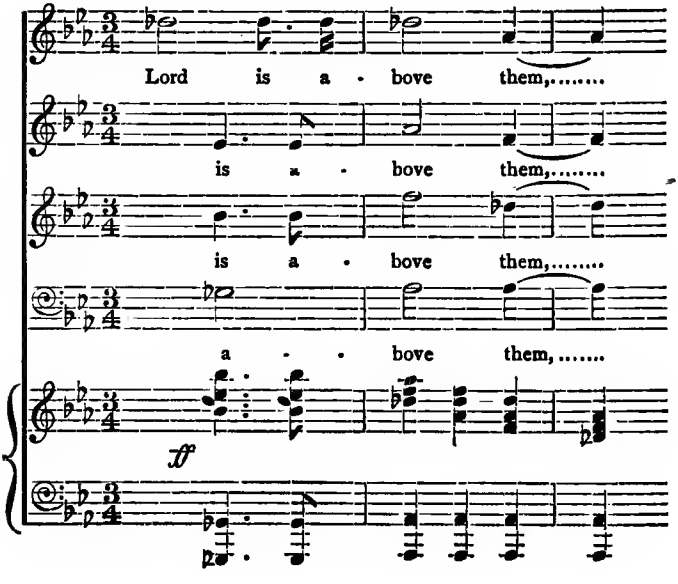
"CREATION," HAYDN.



The second inversion of the tonic chord as a climax is generally ushered in by the harmony of the sub-

dominant or of the supertonic, with or without seventh (I am now leaving chromatic effect out of consideration). In the following example it is ushered in by the supertonic, with seventh. In this instance the æsthetic effect of the progression is so great that it seems to overshadow that of the ensuing cadence. This is perhaps as strong an exemplification of the remarkable power of the six-four chord on the tonic used as a climax as there is in music.

"ELIJAH," MENDELSSOHN.

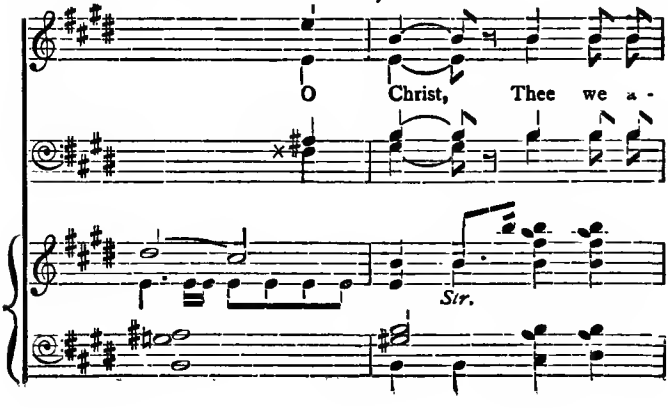


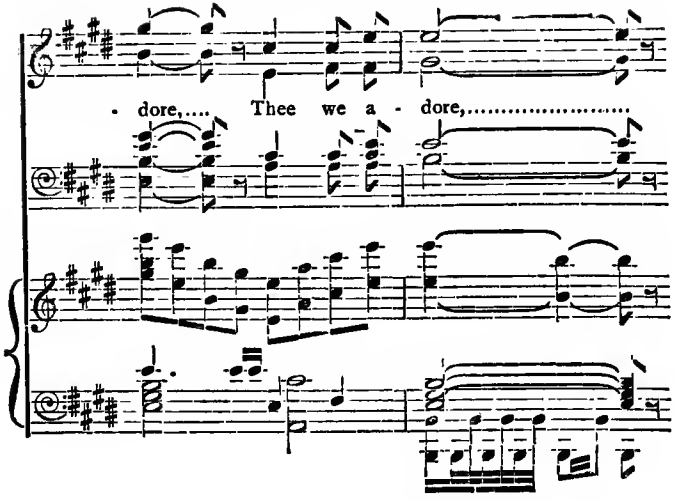
Of course in the case just illustrated the effect is enhanced in virtue of its happening to be at the same time the sequel of a modulation. This circumstance introduces a new principle on which all effect in both melody and harmony is inordinately enhanced.

In the following extract we have the two effects in succession, at "Thee" and "adore"—the first a little overshadowed by the powerful effect of the tonic chord when the third dominates.

As I have intimated, neither of these effects appear to have been conspicuous before Haydn. Probably, whatever may be their foundation, they were led to,—as we have seen the effects of the seventh and ninth on the dominant, in the example from Monteverde, were led to,—by melodic feeling.

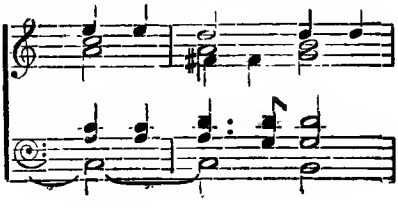
"THE REDEMPTION," GOUNOD.



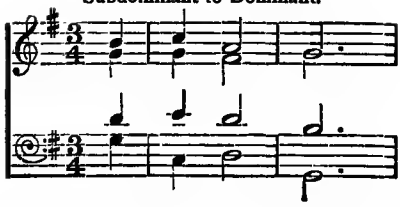


A lesser but still marked æsthetic effect is produced by the progression of the chord of the subdominant or of the supertonic (with or without seventh), to the chord of the dominant seventh, as in the following examples:—

CARISSIMI.
Supertonic to Dominant.



HANDEL.
Subdominant to Dominant.



From the point of view of the theorist, the explanation of the remarkable effects produced by the use of the chord of the subdominant or of that of the supertonic (with or without seventh) when preceding either the progression of the dominant seventh to the tonic chord, or the second inversion of the latter as it ushers in the dominant chord, lies in the fact that both the subdominant and supertonic chords bring into evidence the sixth degree of the scale, whilst all the other degrees are heard in the dominant seventh and tonic chords. But in the examples I have given that bring in the harmony of the subdominant and supertonic there is far more than a certain feeling of equilibrium as regards tonality, or the use of the scale. I refer once more to the great truth that the vital links in every kind of development are those changes, that with the advantages for the sake of which they were made and which alone their devisors were cognisant of, involve

a potentiality destined to be unfolded in the future. This is evidenced in a remarkable way in the various and great effects to which I have alluded, the functioning chords of which were destined to unfold an expression undreamed of by the first users of those chords. In fact it is evidenced, as we shall further see, largely and wonderfully by the great world of harmonic treatment which our complete system of overlapping scales, begun in the prompting of a local and finite purpose, has rendered possible.

To return to the chord of the dominant seventh, I consider that the great cause of its influence on music is its remarkable æsthetic power, though it probably led to the coalescence of the ecclesiastical modes into the modern major and minor, consolidated the feeling of a definite key, and thus contributed largely to the establishment of clear tonality. But it must be observed that it appeared in portions, and that each unfolding was part of a general construction possessing other elements of effect making for clear tonality.

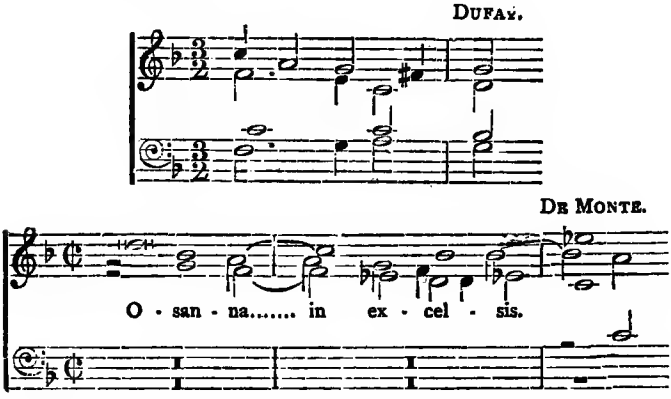
CHAPTER XVI.

MODULATION.

I REMARKED in the previous chapter that the harmonic combinations discovered up to the time of Palestrina had not then unfolded a tithe of the æsthetic effect it was in them to unfold. In illustration of this I pointed out that at that period the use of the common chord was largely confined to the first position. In the present chapter I shall show that beyond all the effects which lie in the use of a chord when a single key is kept to it is capable of putting forth what may be termed a new birth of effect when appearing in another key before the influence of the old has quite passed away. This process, termed modulation, applies to melody as well as harmony, and as we shall see, it led the way to a vast extension of the art in form and power —in fact, to an augmenting of its every factor of effect.

That the principle of varying the expression in both melody and harmony by the incorporation of notes

belonging to another key actuated the composers of the early Flemish period is evident in the examples I have already given. The following are two instances contained in the examples already given from Dufay and De Monte.



The principle of modulation is, however, in much fuller and clearer evidence in the following example from a work by Heinrich Schütz (Henricus Sagittarius), 1585-1672. It relates to a period which though chronologically not much in advance of the period of Palestrina occupies the further side of a new departure, namely, the application of harmony in the form of accompaniment to recitative and song. That departure however I shall treat of in a subsequent chapter.

Now when Je-sus was in Beth-a-ny there came un-to Him a

wo-man, hav-ing an a-la-bas-ter box with pre-ci-ous

a tempo.

oint-ment, and pour'd it on His head.

FROM THE "FOUR PASSIONS." HEINRICH SCHÜTZ, 1585-1672.

The reader will observe that the vocal part at the

second half of bar five—where the triplet occurs—is harmonised by a progression proper to the key of A-minor, and the notes to the words "poured it on," by a progression proper to D-minor. Now the effect of these melodic phrases being treated by harmony belonging to those keys is: they take on a quite new expression of which nevertheless the piquancy depends largely upon the effect of the context in the old key. In this process there is really involved a special æsthetic principle in music by means of which the simplest progressions are heightened inordinately in power and beauty when treated harmonically from the standpoints of different keys. The effect is curiously analogous to that which is given when part of a painting stands out in a subtly prepared beam of sunlight. There is perfect continuity between the shaded and the lit part of the scene yet the latter is as it were glorified—revealed in raised power. So in modulation a distinctly raised effect occurs not to be accounted for by either the melody or harmony in themselves. The general conditions which render this possible in music are involved in our system of overlapping scales the remarkable potentiality of which was far from realised even when that system was formally completed as this was not later than

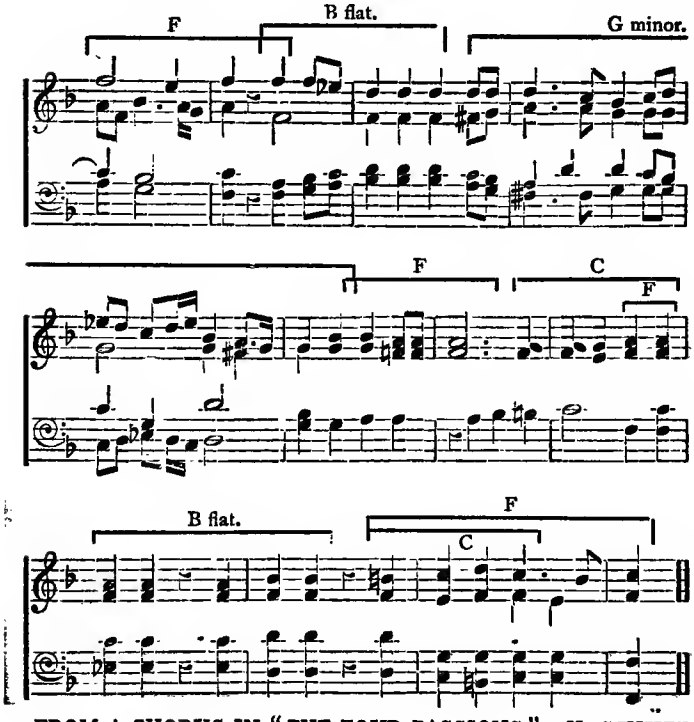
1361, when all the intermediate semitones were included in the Halberstadt organ.

The fact, of which the reader is aware, that the presence of the chord of the dominant seventh is decisive of the key, renders that chord obviously a unique means of modulation. Being introduced on such a degree of the scale that one or more of its notes belong to a new scale the impression of the old key is destroyed, but simultaneously that of a new key is created. Thus by means of this chord the text may travel to a new key (or return from one to the old) without the slightest weakening of coherence due to lessened or suspended feeling of a key-note.

A slight examination of the last example will enable the reader to perceive that, aided largely by the modulations it contains, it embraces a certain long sweep of design with, in places (as in the fifth and seventh bars) greater variety (involving heightened expression) in proportion to space.

Thus far I have referred to modulation in its clear and definite action. But its action is not always distinct and positive. This also may perhaps be illustrated by a reference to natural effect. Thus: as there are infinite minglings of the direct and indirect sun-

ray—as when in mist or under a light cloud we may feel, as a warmer glow breaks through the luminous haze, that the direct ray is not all intercepted—so, in music, we may feel the influence of a key that does not definitely prevail. Sometimes the feelings of two keys are mingled. Instances of this occur in listening to the following extract (also from the "Four Passions")



FROM A CHORUS IN "THE FOUR PASSIONS." H. SCHUTZ.

where the lines overlap. The lines and letters define the passages in different keys. The reader will observe in this extract that—notwithstanding the various changes of tonality above referred to—the design is continuous whilst there is much variety of phrase as well as of expression.

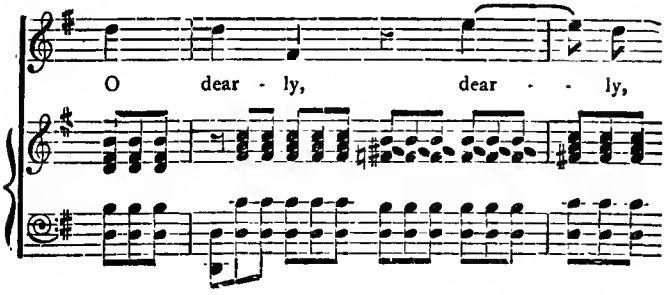
That peculiar intensification of effect to which I have recently referred, which is the soul of modulation, is far from pronounced in the examples which thus far I have given. Though it is felt definitely in all effective modulation its more striking manifestations occur in modern music. To refer once more to the principle that it is the future consequences which give to any development the greater part of its importance, perhaps nothing in the history of music illustrates that principle more forcibly than a comparison of the effect of modulation in modern music with the part it plays in the music of the latter half of the sixteenth century. Notwithstanding it is in clear evidence in Palestrina, as shown in the short examples I have given, it is with this composer prompted to subserve extended structure and broad antiphonal effect rather than to intensify passing expression. After Palestrina it still continued to be largely con-

cerned in symmetric construction whilst the increased expression due to it remained fairly evenly manifested throughout the piece, as shown in the last example. Yet as I have said and we shall see in due course, in virtue of its power of giving special character to the shortest phrase it led ultimately to a peculiarly terse form of melody, and to harmonic effect so *éclatant* that we can only describe it as an æsthetic revelation.

I may here refer to the, of course, well known fact that the key about to prevail may be impressed by melody alone. The fact that part of the effect of melody is the fulfilling of expectation implies that it also excites expectation. Thus modulation may aid structural design and give increase of beauty in melody alone. This is illustrated in the case of every easily followed unaccompanied melody that covers more than one key. Further, the melodic intention may be so distinctly impressed as to annul the influence of notes foreign to the key. Thus in the concluding phrase of the last example, notwithstanding the B natural the listener is still led to expect the close in F.

The last mentioned kind of effect may perhaps be regarded as an early feeling towards a principle of expression destined to play a peculiar part in modern

music. In the example just referred to the diverting influence exists in both the vocal part and the accompaniment. But in the following, there is acute passing antagonism between the vocal part and the accompaniment. The former at the point involved is felt to be the more strenuous and pronounced as it clashes with the accompaniment the passing of which to more accordant harmony followed by the descent of the suspended note is an instance of the ineffable expression which may be produced by this means.



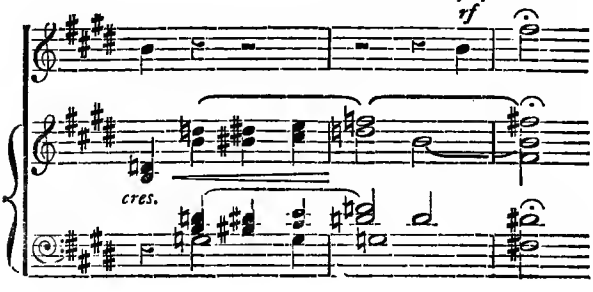
FROM "THERE IS A GREEN HILL." GOUNOD.

I have said that after Palestrina the heightening of expression by modulation proceeded with a certain deliberation as it attended the structural development of the period. But as the contact of effects between removed keys became more developed, and modulation was

effected more rapidly—even instantaneously—that heightening of effect to which I have referred became unfolded in as it were a coruscation of beauty.

The example below, like the last, belongs to a period far in advance of the general stage of musical development at which we have arrived, but it illustrates forcibly the special effect of modulation to which I now allude. A melodic phrase consisting simply of a perfect fifth starts on the seventh degree of the scale of C and culminates on F-sharp to the harmony of the second inversion of the major common chord on B. Thus the inherent æsthetic power connected with the use of this position of the common chord, to which I have called special attention, rises suddenly (yet in perfect organic continuity) in a key five removes distant. These are the simple conditions of the remarkable intensification of effect that follows.

C. M. WEBER, 1786–1826.



CHAPTER XVII.

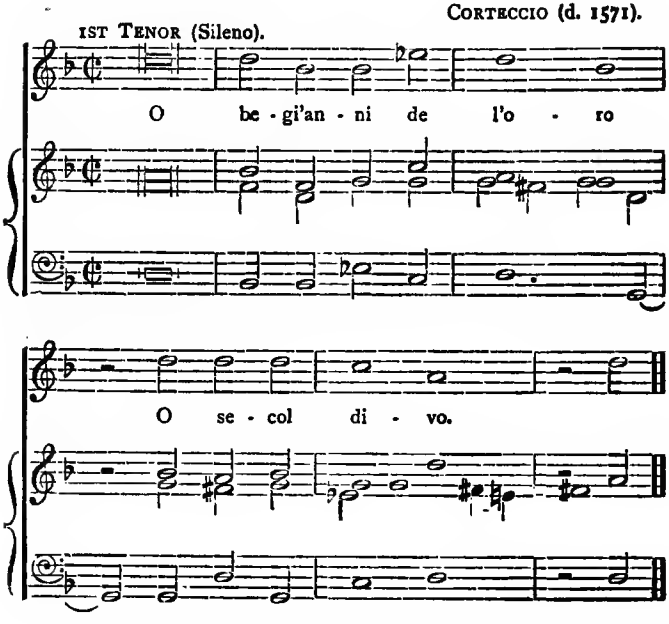
THE RISE OF ITALIAN MELODY: THE BEGINNING OF THE ARTISTIC SONG.

NOT the least curious of some of the facts that the study of musical history reveals is, that serious individual expression in a song for a single voice, as in the vocal solo of modern music, was not a development of the songs of troubadours or any traditional ditties consisting of one part melodies. A parallel fact is, that the beauties of harmony should have been first revealed in the rencontres of fragments of melody, for somewhat as unexpected as this is the fact that melody with accompaniment, as a vehicle of special feeling, should have unfolded from vocal part music, generally polyphonic in form. This, however, is what occurred, and not in one country only, but in the

various countries in Europe where musical art was cultivated. In illustration I will first refer to the secular songs of Italy before or about the beginning of the period when the works of Flemish composers began to get known in Italy. The first Italian publisher who issued these works was Petrucci. This occurred in 1502. At that period the vocal music in vogue in Italy consisted of tuneful but frivolous part-songs, called Frottole, and songs called Canzone Villanelle which were sung as drinking songs and though popular in style were *imitative* in form. Into the Canzone Villanella passed gradually the gayer and merrier type of Frottola whilst the more serious type passed into the Madrigal. Mrs. Edmund Wodehouse to whose most admirable and informing study on Song in Groves' Dictionary I am much indebted in this part of the present subject, mentions the case of a Frottola printed in Junta's Roman collection of 1526, which evidently became converted into a Villanella as it is still sung in Venice with the same words and melody; this originally was a part-song with the melody in the tenor.

The first attempt (as it is supposed to have been) at solo-singing with accompaniment is said to have been made in an Intermezzo performed in 1539. In this

case, however, though the solo singer (in the character of Silenus) is said to have accompanied himself on the violone, the music he sang was the upper part of a Madrigal (by Corteccio) while the under parts, which represented the six satyrs, were taken by wind instruments and thus formed an accompaniment. That these parts were as much independent voices as the upper part may be observed in the following extract.



FROM AN INTERMEZZO PERFORMED IN 1539.

Another attempt to give the effect of voice and accompaniment was made in 1594. An opera entitled "L'Amphiparnasso" by Orazzio Vecchio was performed at Mantua and printed in Venice soon afterwards. In this case the music consisted of a series of madrigals for five voices, there being no instrumental accompaniment and no ritornello. When a single character occupied the stage the other four parts were sung behind the scene in order to form the accompaniment; when two characters were on the stage the three remaining parts were heard behind the scene.

It will be seen that in the above cases the madrigal was so modified in performance as to give the effect of there being a leading part or leading parts.

But modification in this direction was not proceeding in the madrigal only. A similar process was going on in various forms of part music. The villanella was sometimes arranged to suit a single voice with lute accompaniment.

The year 1600 is regarded as epochal in musical history in virtue of two events that took place in it. On October 6, at the Pitti Palace, Florence, the fable of Orpheus and Eurydice put into verse by Ottavia Rinuccini and set to music by Jacopo Peri (d. after

1610) and Giulio Caccini (1588-1640) was performed for the first time, the occasion being portion of the festivities by which the marriage of Marie de Médicis with Henry IV. was celebrated. In the same year (in February) a mystery, entitled the "Rappresentazione del anima e corpo," the words by Laura Guidiccini, the music by Emilio del Cavaliere (1550-C.1598) was represented in Rome in the Church of the Oratoriens of St. Mary in Vallicella. In the performance of this opera recitative was for the first time put to a decisive test, whilst the above oratorio was the first work of the kind in which recitative was introduced—so the historical tradition runs.

According to generally accepted accounts music for a single voice as introduced in these works was the outcome of the discussion and experiment which took place at one of those artistic reunions which at this period were held in every town in Italy at the house of some noble dilettante, or some celebrated artist or writer. The reunion now referred to met at the house of John Bardi, Count of Verno, Florence, and included Peri, Caccini and Cavaliere; this little circle of cognoscenti having been for some time much occupied with the idea of reviving the musical declamation of ancient Greek drama

It is generally considered that the employment of recitative in the opera and the oratorio to which I have just referred was the initiative to which its modern development is to be traced. There can be no doubt that the attempt above referred to, to consummate a new kind of effect in a clear art-space—free from all old operations—to, in fact, begin *de novo*, turned out in the circumstances to be a particularly happy idea. It let into the art-atmosphere a breath of nature, which stimulated intelligent development. At the same time it is probable that too much importance has been attached to this incident. If recitative and melody for a single voice, should have been the special result of the above gathering—a result involving an entirely new form, disengaged from traditional procedure—such a fact would be quite opposed to that process of evolution which we have seen took place in the cases of those other forms of musical effect which we have thus far considered. There is scarcely any doubt that sooner or later there would, out of the general course of art activity, and thus quite independently of the gatherings at Bardi's, have emerged a form more suitable for individual expression, and more realistic than the idyllic madrigal or more or less conventional part-song. I

have already shown that in those definite though peculiar attempts to use the madrigal for individual expression which have been described, a process tending in the above directions had already begun to unfold in the madrigal itself. Nor, as I have said, was this tendency confined to Italy. A change of the same kind was proceeding in France and Germany. In France, to use the words of Mrs. Edmund Wodehouse, "in the latter years of the sixteenth century, songs for one voice began to find favour and to drive airs for three, four, five or six voices from the ground which they had occupied for more than one hundred and fifty years, whilst in Germany, Hans Leo Hassler breathed into his songs the light spirit of Italian Villanelle and Fa-la's, giving more prominence to the melody than the other voice-parts; and like characteristics are noticeable in Melchior Franks' and Reynold's collections of songs."

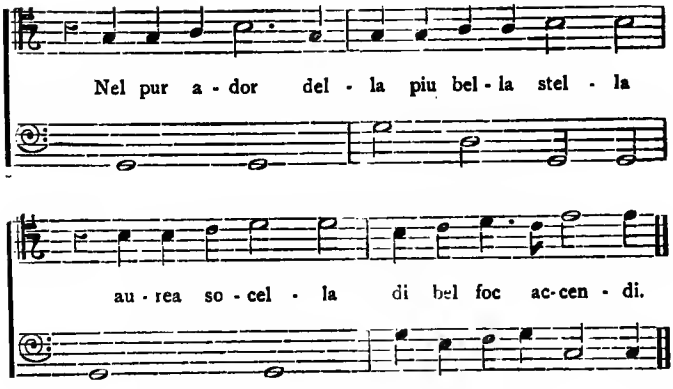
Here, then, are evidences of a general movement (consisting of a process of modification in multi-voiced music) towards the evolution of a vocal solo harmonised, which was going on before as well as at the time of the Bardi gatherings. During this general period the instinct of musicians seems to have been

pressing towards a style of work having a more dramatic and individual expression than the conventional expression peculiar to part-songs or to such songs of one part (with or without some slight accompaniment) as no doubt have always existed.

It is not therefore surprising that the feeling just described combined with that passion for antiquity which at the time prevailed throughout the cultured classes of Western Europe should have suggested to the artistic circle that formed at the house of John Bardi the idea of reviving the musical declamation of the ancient Greek drama. But the important point is that in this as in most of the other cases of art-development which I have traced, the path by which the new expression was reached, was through extant form. Nor is this simply a conclusion depending solely upon the general historical facts to which I have referred, but its truth may be demonstrated by internal evidence in the new music itself.

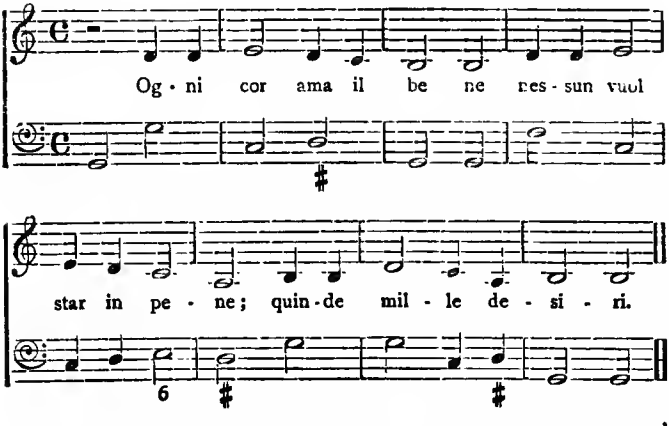
The following extracts from the "Orpheus" of Peri and the "Rappresentazione" by Cavaliere, though containing some exclamatory effect, bear, in the frequency of sustained notes and the regular form of the phrases, evident traces of the madrigal.

JACOPO PERI (d. *circa* 1610).



FROM "ORPHEUS AND EURYDICE."

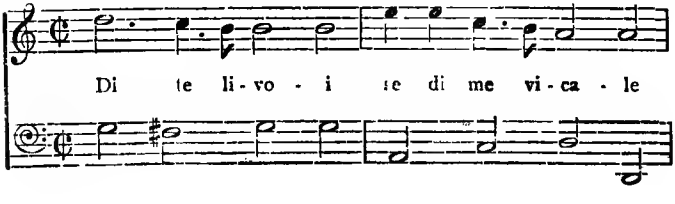
EMILIO DEL CAVALIERE (1550–*circa* 1598).

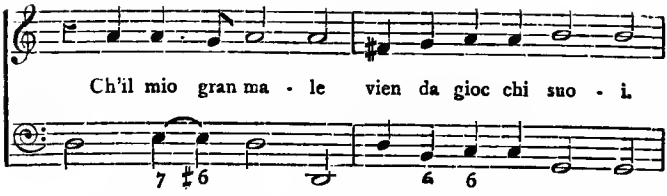


FROM THE "RAPPRESENTAZIONE DEL ANIMA E CORPO."

The publication by Caccini in 1601 of a collection of compositions including airs for one voice, is also regarded as an epoch in musical history. The airs for one voice are considered to contain the germ of the artistic song; they are looked upon as the first definite embodiments in monodic effect of the principle of free construction for the purpose of vivid and varied individual expression. In the first two bars of the following extract from this collection the note of individual feeling is clearly perceptible, whilst, as bearing on our recent statement that the new music shows traces of the madrigal, the reader will observe in the last bar—in the rhythmic uniformity of melody and bass, and the generally stereotyped expression—unmistakable suggestions of that form of composition. This illustration is rendered all the more forcible by the fact that according to Domi, the historian, the new music of Caccini embodied an *advance* in vocal solo.

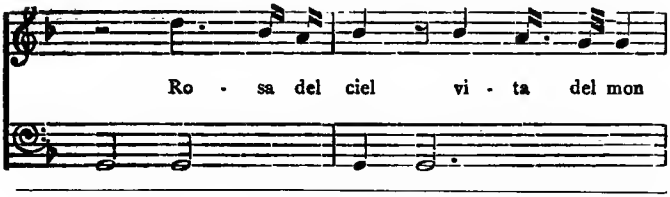
FROM CACCINI'S "NUOVO MUSICHE." PUBLISHED 1601.



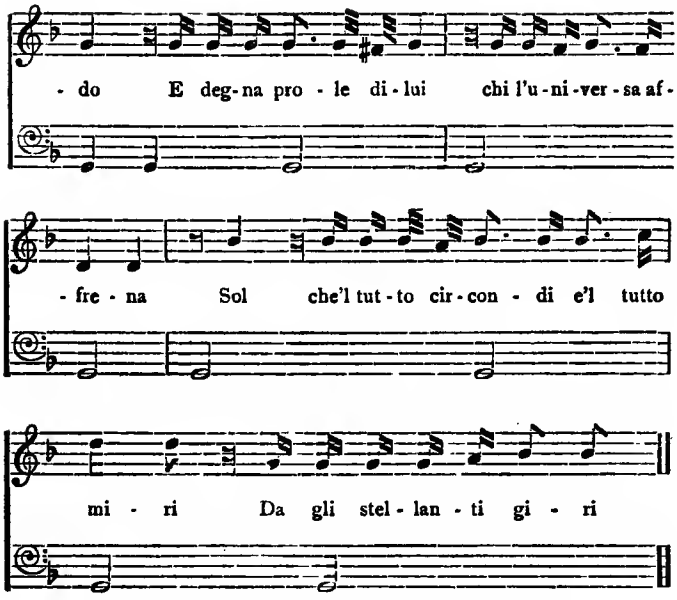


The influence of the madrigal explains that mingling of song and recitative proper which appears in this early monodic effect. Claude Monteverde (C. 1570-1649), however, distinctly broke through this influence, confining melodic prompting to his ritornels and making his recitative freely linguistic. The advance in opera claimed for Monteverde, is the more prominent position of music in relation to the literary element in the general expression of the piece, together with a bolder application of harmony. The following extract is from his setting of "Orpheus and Eurydice," which was produced at Mantua in 1607, and the score of which was published in Venice in 1609.*

MONTEVERDE (*circa* 1570–1649).



* For the sake of simplicity I have in this extract made the length of the bar one semibreve instead of two as in the original.



RECIT. FROM SCENE IN "ORPHEUS," ACT I.

This arbitrary confining vocal expression to the broken, exclamatory effect of recitative proper, did not, however, find favour with succeeding composers. In fact it was soon found that melody acquired a beauty all the more intense as it became the expression of individual feeling.

This latter advance is evident in the two following extracts. The first is from an oratorio by Domenico Mazzocchi, produced in Rome, 1631. As the reader

will feel it is a high example of that continuous expression in which directly graphic effect alternates with touches of gracious melody.

DOMENICO MAZZOCCHI (*circa* 1631).

Ben vuol sa - nar - la il re - den - to - re 'i

san - gue ma indar- no spar - si il pre - ti

- o - so - ri - o sa rá per lei di quel be -

- a - to san - gue sen- za il do - glio - so hu - mor.

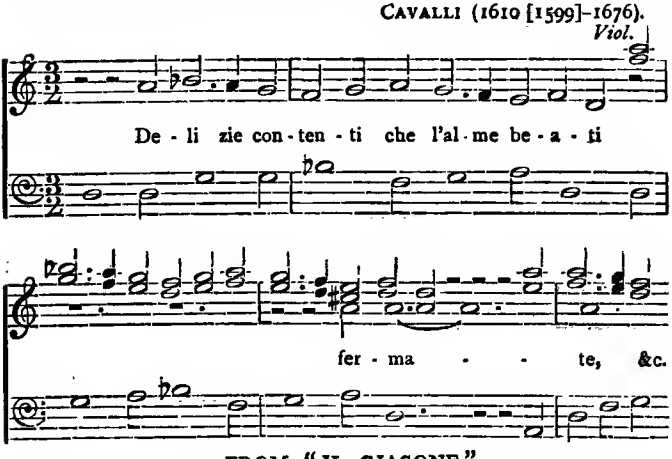
FROM QUERIMONIA DI S. MARIA MADDELENA.

As a matter of passing though irrelevant interest

the reader will no doubt observe that the first phrase of the above is identical with the opening phrase of Beethoven's C minor Symphony.

The second extract is from "Il Giasone," an opera, produced in 1649, by Pietro Francesco Cavalli (1610 (1599)-1676) who studied under Monteverde. In even this short example, as the reader will observe, the unique traits of Italian melody stand out clearly; with its flowing simplicity there is a certain superb grace and elevation of expression which renders its style distinctive. It almost seems as if there had descended to this people an accent from some transcendent lost language, or some floating strains from a past music of which we have no other knowledge.

CAVALLI (1610 [1599]-1676).



FROM "IL GIASONE."

CHAPTER XVIII.

THE FORESHADOWING OF MODERN ORATORIO.

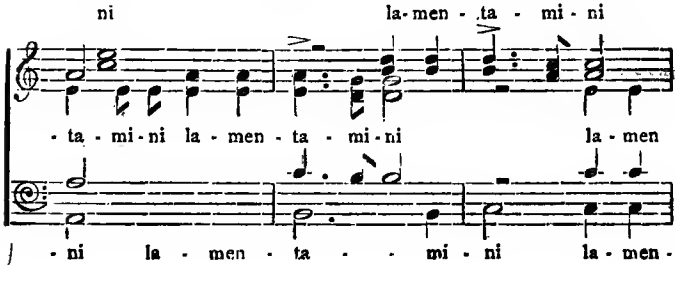
IN describing the unfolding of recitative I pointed out that it was not a local development but the inevitable outcome of a general instinct in the musicians of Germany and France as well as Italy which sought a more individual and realistic form of musical utterance than was then extant. I also showed that when found the new form in certain peculiarities bore distinct traces of the madrigal.

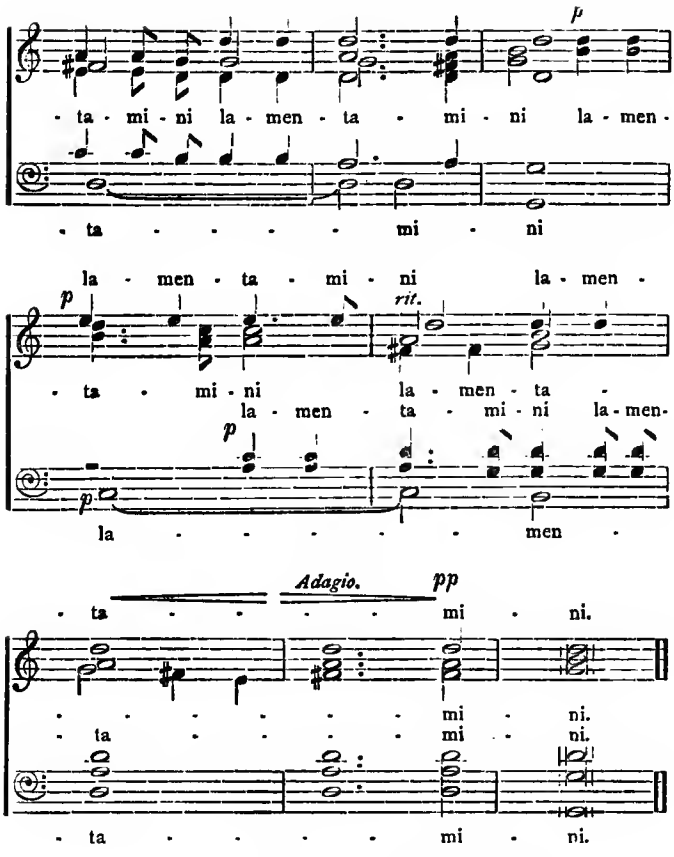
We should bear in mind that in this part of our investigations although occupied immediately with monodic effect we are still in the general path of harmonic development, which development was necessarily affected by the new movement in the impulse the latter tended to give to the inspiration of melody which, as I have pointed out and as we shall further see, is the

crowning factor in the constitution of harmony in its more complete and striking effects.

We saw in the extract by Domenico Mazzocchi, given in the last chapter, that expressive recitative had entered oratorio by the period of Cavalli and Carissimi, who were contemporaries of Mazzocchi though he was probably the younger of the three. Now at this period we not only find individual feeling and the dramatic spirit, in the vocal solo of oratorio but also in the chorus. A signal example of individual feeling,—that is, of feeling personal in its character though it may be shared by many,—occurs in the final chorus of Carissimi's "Jephtha," "Plorate filii Israel." In this chorus from which I give the following extract, there is a depth of feeling which has broken through the crudeness of new development and attained an expression which in its absolute truth and beauty is independent of time and period.

CARISSIMI.





FROM "JEPHTHA." (FINAL CHORUS).

The resemblance in general form and style between the above chorus and that of "Hear Jacob's God" in

Handel's "Samson" combined with the presence in both of coinciding passages seems to preclude all doubt that the latter was modelled on the former. One interesting fact that strikes the student in comparing these two choruses is, that notwithstanding in Carissimi's the broad, massive style is less fully developed, the majesty less unequivocal, than in Handel's, it has yet in certain places a more *modern* expression, as, for instance, in the expressive discord at the fourth bar of the above extract and more particularly at the seventh bar, where that distinctly modern effect, the *harmonic climax*, is in evidence.

Notwithstanding the intense personal expression of the beautiful melodic phrases towards the conclusion of this chorus I doubt that in this case that expression descends from the Rinuccini and Peri experiment. The above phrases seem rather an independent though exceptional manifestation of the normal stream of tendency in the Italian musical genius.

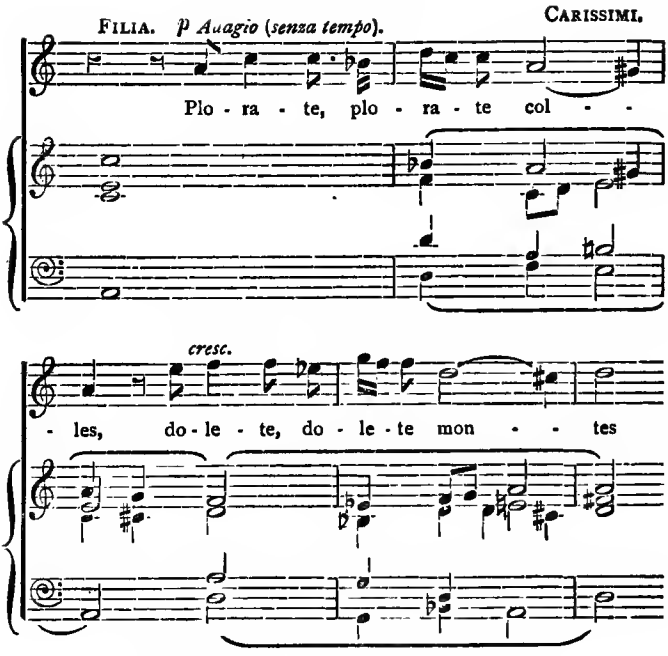
In chapter 16 I referred to and gave two extracts from the German oratorio "The Four Passions" by Heinrich Shütz who was a contemporary of Carissimi. Now Heinrich Shütz had studied under Gabrielli in Venice until 1612, and in 1627 set to music

Martin Opertz's translation into German of Rinuccini's "Dafne." He would therefore be well abreast of the state of the art in Italy. Yet notwithstanding this work ("The Four Passions") may owe much to the influence of Italy that influence is so perfectly assimilated as to be largely latent— it is of course observable here and there but on the whole the above work gives the impression of being a natural, homogeneous product of the German genius to which would belong the habitude in *imitation*, the fervour of expression in synchronous choral enunciation, and the rich, involved part-writing which it contains. The example at page 286 affords some idea of the second of these qualities whilst the setting of the title (a practice that existed in Italy as well as Germany at this time), "The passion of our Lord and Saviour as it is recorded in the holy gospel,"—constituting an eloquent exordium to the work,—is a beautiful if simple example of the last. Of course all these kinds of effect alternate more or less in most of the choruses.

Now these two works having been composed, one in Italy the other in Germany, at this particular period, a comparison of them is extremely interesting both in itself and in virtue of their revealing between them

very clearly the prototype of so much in the form and spirit of modern oratorio.

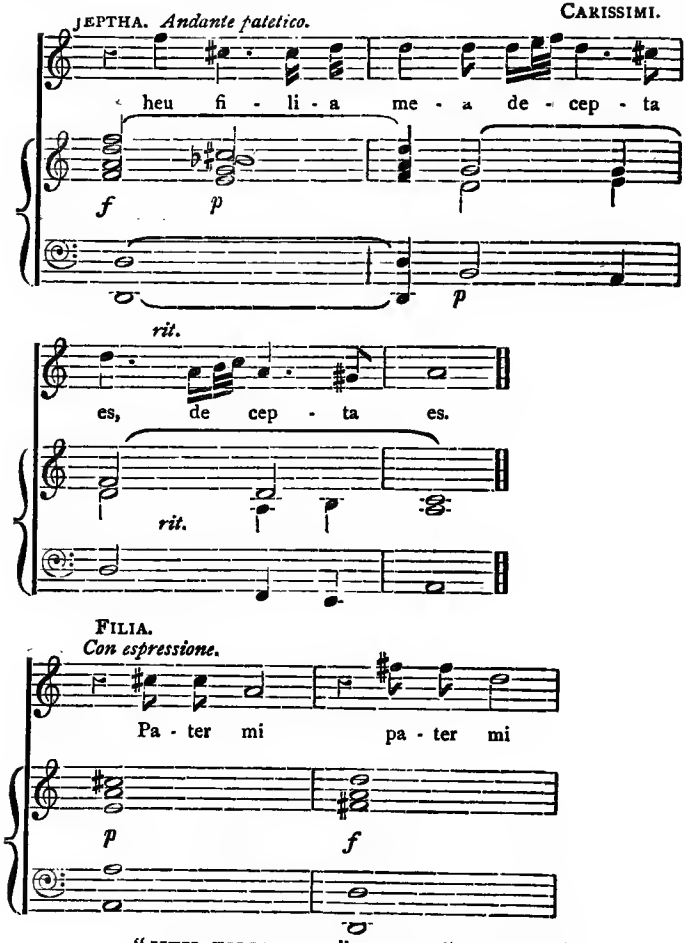
To resume then concerning "Jephtha": perhaps its most important feature is the recitative, in studying which one is struck forcibly by the freshness and fulness of the modern spirit and the strenuous feeling towards modern treatment which animate it. The composer accepts and observes strictly,—perhaps in the enthusiasm attending a new departure,—the principle that recitative must differ sharply from all conventional effect, yet notwithstanding—by use only of the time and accent of language (or its careful imitation) and a minimum of different musical intervals and harmonic changes—he succeeds in charging his text with most intense feeling whilst impressing graphically the dramatic spirit of the various scenes. In one of these —one of the various situations which the composer defines musically by a change of style—he yields momentarily to the melodic impulse but at the same time, as it were, checks himself by the direction *senza tempo*. This melodic touch is so beautiful and at the repetition of the phrase the modulation so bold, causing the phrase to ring with all the freshness of a modern effect, that I quote it.



"PLORATE COLES," FROM "JEPHTHA."

Now as an example of the dramatic feeling of this composer I refer to that part of the work where the daughter replies to her father's announcement that she is doomed to sacrifice under his vow. Whereas Jephtha's utterance is, naturally enough, set largely in the minor key, when his daughter replies the major key rings out; her spirit rising to the heroic her *note* is

triumph, and it is heard—at once—in her very first intonation—witness the following extract.



"HEU FILIA MEA," FROM "JEPHTHA."

To pass now to the recitative of the "Four Passions." We must of course bear in mind that though both the works I am comparing are drawn from Scripture and involve the dramatic form, they differ largely in the character of their conception. "Jephtha" is first mainly a drama; "The Four Passions" is first and mainly an expression of religious feeling.

Now in the recitative generally of the latter work the composer by no means accepts and observes the principle of separating recitative from melody. On the other hand wherever expression prompts he falls into melodic conformation and special harmonic treatment. This is fairly illustrated in the extract at page 283, in which, moreover, the reader will particularly not fail to observe that between the first and the last chords there is gradual *culmination* of harmonic effect. In this connection I am reminded of the following remark of W. S. Rockstro concerning the German School: "Unlike Peri and Monteverde the German masters destroyed nothing. They were content to work on the old foundations; introducing from time to time whatever changes the spirit of the age dictated." This seems distinctly borne out in the present comparison of the recitatives of Carissimi and Heinrich

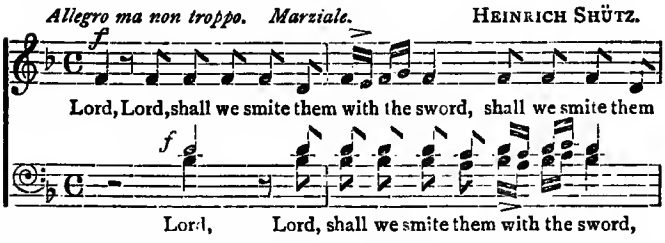
Shütz. In virtue of that greater freedom of the recitative in "The Four Passions" to which I have just alluded, this recitative may be regarded as the prototype of that intelligent style which unites the beauty and expression of song with the movement of language and which (as well as the stricter and more descriptive or declamatory style) is used largely by Handel and, in modern oratorio, by Spohr and Mendelssohn. I may add in connection with the foregoing comparison that in harmony with the specially religious character of "The Four Passions" its recitative is generally more restrained in expression than that of "Jephtha."

In the choral writing of these two works there is much in common yet at the same time some suggestive differences. In both the dramatic impulse is peculiarly alert and in the imitative form expressed with equal fluency. But the rich, involved effect of which the opening chorus of the "Passions" is an example, is absent in "Jephtha." That higher development in this style, which is peculiar to the German school, is considered to be largely due to the special cultivation of organ playing in which it was the fortune of Germany at this general period to take the lead. On the other hand that

simple, clear, united choral enunciation in the form of plain harmony which renders expression so direct and convincing and which certainly has never been neglected by the German school—witness its use by Handel, Bach and Mendelssohn—is also conspicuous in "Jephtha." But perhaps a more special choral feature in the Italian work is the antiphonal effect between two divisions of the chorus. We have here (though the division is between three trebles, on the one hand, and alto, tenor and bass, on the other) the prototype of the double chorus, of which Handel makes such fine use. We have also in the invocation to the Israelites (by Jephtha's daughter) to raise the hymn of thanksgiving for her father's victory, and its repetition by her companions, a distinct suggestion of that broad type of effect of which Handel and Bach make such brilliant use —the punctuating flowing passages with massive harmonies.

The traits I have referred to in Bach and Handel as drawn from the "Jephtha" of Carissimi are those which make for clearness and brilliancy—which, with expression through beauty, are among the distinguishing qualities of the Italian genius. Now if we again turn to "The Four Passions" we shall there also observe

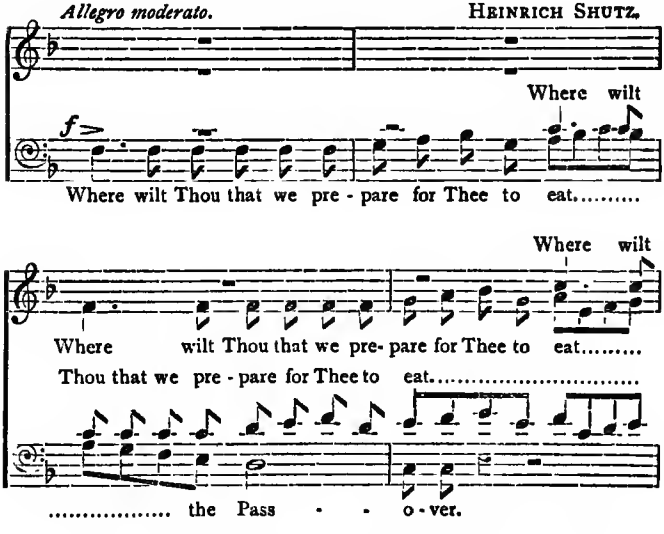
some effects foreshadowing certain features in modern oratorio. Preliminarily I may remark that one chorus in this work, "Lord shall we smite them with the sword," is distinctly in the Italian style, and in its containing an example of the literal expression of an idea by means of a certain figure or special conformation of notes, is particularly suggestive of Handel. Both of these points may be observed in the following extract which is simply the first two bars of the above chorus.



FROM "THE FOUR PASSIONS" (CHORUS: "LORD SHALL WE SMITE THEM.")

The effects, however, to which I was about to allude are suggestive more of Bach and Mendelssohn than Handel. The reader is no doubt aware that whereas Handel usually expresses dramatic feeling through a characteristic and frequently melodious subject which

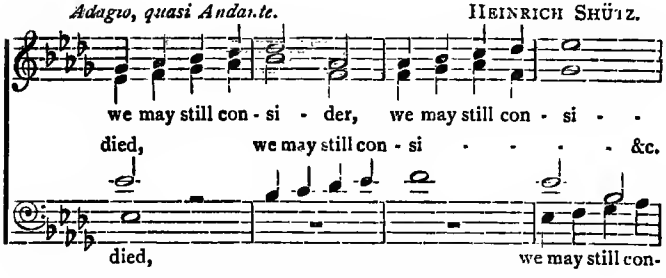
in working yields a certain rounded fulness of effect, Bach and Mendelssohn aim mainly at dramatic *directness* in the subject. The respective choruses, "To what purpose is this waste" in the Passion according to St. Matthew and "Now this man" in St. Paul, are examples of this style which as the following extract serves to show is anticipated in "The Four Passions."



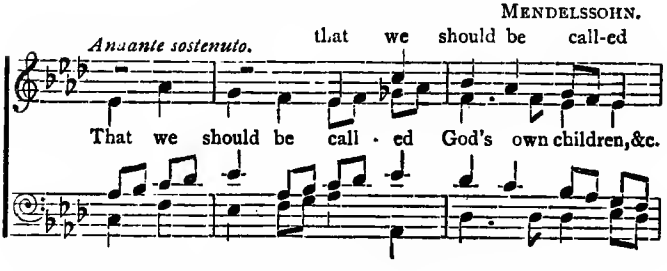
CHORUS: "WHERE WILT THOU," FROM "THE FOUR PASSIONS."

There is another style of writing in "The Four Passions" which has become an august type of choral

effect—in which imitation subordinated to onward moving treatment of the text and involving a free and natural accentuation—forms simple, fervid musical utterance. The two following extracts, the first from "The Four Passions," the second from Mendelssohn's "St. Paul" seem to me to involve a likeness in these respects.



FROM LAST MOVEMENT BUT ONE OF FINAL CHORUS OF "THE FOUR PASSIONS."



FROM CHORUS: "SEE WHAT LOVE," "ST. PAUL."

In Grove's Dictionary is an article on Heinrich Shütz

by the Rev. J. R. Milne. From this article I quote the following passage because though obviously written quite independently of the remark of W. S. Rockstro recently quoted—to the effect of its being a principle of the German school to reject nothing that makes for effectiveness—it harmonises peculiarly with it, as it does with the impression calculated (in this connection) to be derived from the examples generally from "The Four Passions" which I have given.

"His importance in the history of music lies in the mediating position he occupies between the adherents of the old Ecclesiastical style and the followers of the new Monodic style. While showing his thorough appreciation of the new style so far as regarded the importance of dramatic expression he had no desire to lose anything of the beauty and power of the pure and real *a-capella* style."

A noteworthy feature in "Jephtha" is: it contains two vocal solos in which we can clearly observe the prototypes of the Italian aria and bass song with which we are so familiar in Handel. The one for bass has a rudimentary stiffness of form, and both have a certain naïveness of expression as well as a peculiar smallness of dimension. At the same time both attain

perfect individuality. The style will be recognised in the following extract from the soprano song.

Ex. 22. CARISSIMI.

FILIA. *Allegretto molto moderato.*

Can - ta - te me-cum Do - mi - no, can- ta - te om- nes

pop - u - li lau - da - te bel - li prin - ci - pem, qui, &c.

&c.

"CANTATE MECUM." FROM "JEPHTHA."

Photo, F. Hanfstaengl.

THE MUSIC HOUR.

FROM THE PAINTING BY PETER DE HOOCH (OR HOOGH) IN THE RIJKS MUSEUM, AMSTERDAM.
(BORN PROBABLY IN 1630, BELIEVED TO HAVE DIED IN 1681.)

Facing page 321.

CHAPTER XIX.

The Art of Accompaniment.

WE are I think more likely on the whole to underrate than to overrate the development involved in a past condition of musical art, at any period. What with the long imperfection of notation, the loss of evidence, or want of evidence, in manuscripts, and our ignorance of the practical musical skill of the past, the chances are that the living effect of music at any period since the regular cultivation of the art began was less crude and imperfect—in fact fundamentally more like it is now—than we are apt to imagine. There can be little doubt that with the singer who sang to lyre, harp or lute the instinct of accompaniment always to some extent manifested itself. As the chansons of the middle ages consisted as a rule, so far as the instrumental

melody was concerned, of a refrain introduced as a change from recitation, so it was customary for trouvères and troubadours to introduce their songs with a prelude and finish them with a ritornelle. Somewhat in the same way it was customary with the early composers of church music to usher in the voices with a prelude drawn from the vocal parts.

In the case of church music sustained by the organ the following circumstances influenced the rise of accompaniment. The use of the organ for a long time was limited to supporting the voices in the order in which the parts were written. As a consequence when the vocal bass was silent the bass of the organ was also silent. Soon, however, the instinct of musicians suggested a continuous or *through* bass; then the idea occurred to them of indicating by figures placed above this bass the harmony involved by the various parts, so that the organist instead of playing the parts played simply the harmony they involved; and thus, as there was some scope for the player's taste in the way of introducing these chords, the feeling for accompaniment would necessarily be in some degree called forth. This is one more instance of the creative influence of practical circumstances upon

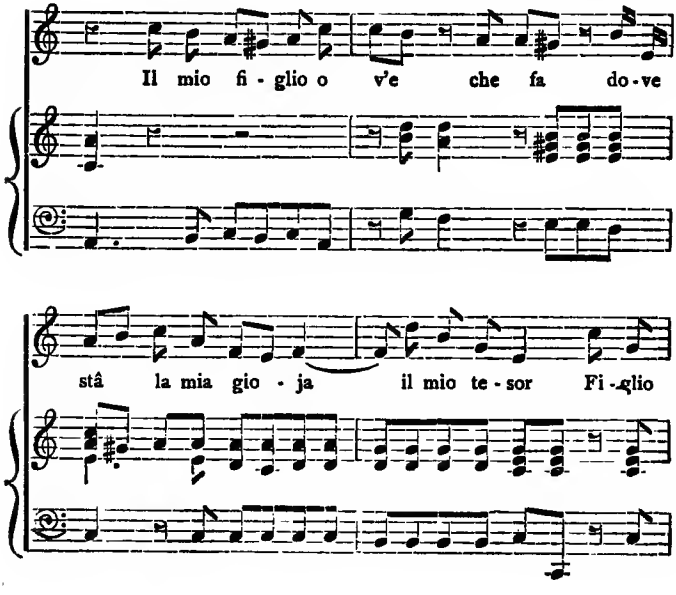
the art. Precise rules for *through* or *thorough* bass were first published by Viadama in 1606.

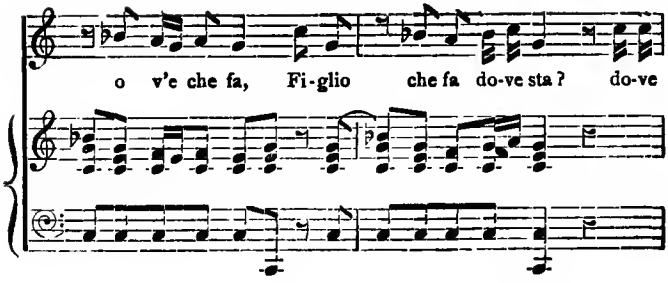
Now the composers of the "new music," Peri, Caccini, Cavaliere, etc., being mostly organists or chapel masters, would be familiar with this kind of accompaniment. Thus when the characteristic vocal solo came into existence the accompaniment adopted consisted of extant harmonic progressions involving largely sustained chords. But by the period of Cavalli accompaniment began to acquire greater in-individuality and independence.

By referring to the example from "Il Giasone" (on page 304), the reader will observe that at the end of the second bar, where the vocal part ceases for the time being, the accompaniment is followed by an interlude (played by the violin) which begins by repeating the opening strain and towards its ending (at the fourth bar) enters into combination with the vocal part as this recommences. Now just here we, as it were, place the finger upon the beginning of a development destined to lead to some of the most beautiful effects in modern music. It consists in the accompaniment unfolding here and there accessory articulation, sometimes alone, sometimes in conjunc-

tion with the vocal part. A very short but perfect instance of this development occurs in the following extract from Alessandro Scarlatti in the phrase between the fourth and fifth, as in that between the fifth and sixth, bars—in each case close upon the word "Figlio." In this example, which betrays a peculiar pliancy, softness and tenderness of touch,—giving the minutest shade of expression,—a salient development in melodic form is attained.

TREBLE VOICE. ALESSANDRO SCARLATTI (1659-1725).

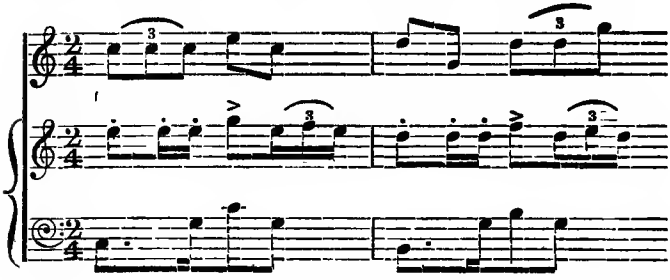




I may mention in passing that the son (Domenico) of Alessandro Scarlatti who, as I have stated, studied under Carissimi, became acquainted with Handel at Venice, in 1708. This fact helps us to realise the perfect continuity that prevailed in that part of musical activity which related to the Italian song throughout the main course of its development—from about the middle of the seventeenth, to that of the eighteenth century.

In the meantime while development in the kind of accompaniment which I have thus far traced, was proceeding in Opera and Oratorio, that form consisting of broken chords which, as we have seen, was in evidence in Asia in the earliest uses of the lyre, harp and lute had not ceased. Having spread to Europe with the above type of instruments it attained ultimately the greatest variety of form, particularly in the rhythmic direction. As evidence of this I may

quote the following passage from the able article of Mrs. Edmund Wodehouse to which I have referred. Speaking of the songs of Andalusia, which she remarks have a strongly marked Eastern character, Mrs. Wodehouse says:—"In the Andalusian songs there are often three different rhythms in one bar, none predominating but each equally important, as the different voices are in polyphonic music. For example":

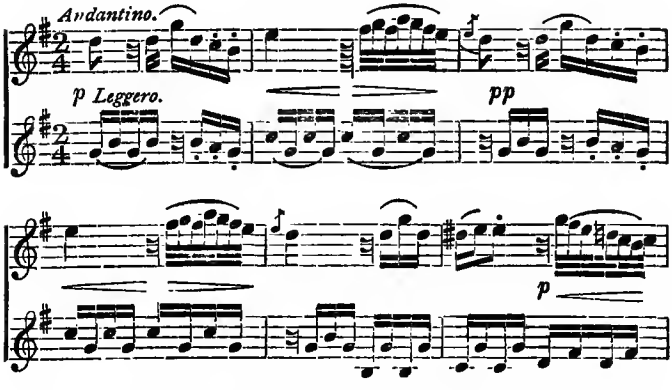


Then in reference to the Andalusian dance songs —*fandangos*, *rondeñas* and *malagñenas*,* she remarks: "They usually consist of two divisions; viz., the *copla* (couplet) and the *ritornel*, which is for the accompanying instrument and is frequently the longer and the more important of the two, the skilful guitar player liking to have ample scope." That this strain of accompaniment from the East to some extent in-

* So named after the towns Ronda and Malaga.

fluenced the development of the broken chord type of accompaniment in regular art, lending it variety and the freedom of a matured effect, seems evidenced in the following extract from a short instrumental movement by Michel Angelo Rossi (c. 1620-1660), who was a pupil of Frescobaldi. My principal object, however, in introducing this example is to indicate the development which melody and accompaniment had attained in instrumental music by the period of Cavalli. It is also interesting in that it foresounds the note of Mozart, suggesting how distinctly Italian that note was.

MICHAEL ANGELO ROSSI (C 1620-1660).



FROM ANDANTINO ED ALLEGRO.

It will no doubt strike the reader that, allowing for

the special type of accompaniment, there is generally in the above example such a maturity of form and ripeness of style, that it is difficult to conceive its having been vitally influenced by the rudimentary monody of Peri and Caccini, which only began a generation before. Such rapid development, however, if it occurred may perhaps be explained by the fact to which I have already referred, namely, that some results of a new departure are likely to be worked out more rapidly in the lighter than in the more massive works of composers. As I have said, to one mass, oratorio or opera, would probably be written a dozen canzones, studios or dances. The smaller works, moreover, would be less likely to be dominated by tradition or scholasticism than the larger. This process is illustrated by an episode in the history of opera itself. At the beginning of the eighteenth century the dramatic spirit had become stagnant in serious opera, which had got to consist of an interminable series of airs. To relieve the dulness and monotony of this state of things it became the practice in Italy to introduce between the acts some intermedly—a ballet or little comedy—in which the characters were borrowed from the traditional Italian Masques. The

result was that freedom, naturalness and movement re-entered the dramatic atmosphere attended by a style of music in which feeling, intelligence, melodic spontaneity and the spirit of the situation—all eminently Italian qualities—were combined. Now it was in these light interludes that the art took a new start. They were the beginning of *opera buffa*, which throughout the eighteenth century, was the true nursery of dramatic music. Here we observe how two facts which considered separately seem opposed may work together: the continuity of musical development, and the fact that forms and styles are shaped largely by the exigencies and circumstances of the moment.

The influence of smaller or lighter kinds of work on the serious development of the art is instanced convincingly in dance and festal music. There can be no doubt that in primitive times dance and song were united, or closely connected, by a common occasion, and that instrumental music of some kind attended both; that then as each form grew a dividing of the ways occurred, instrumental music beginning to run in a channel of its own in connection with dances, processions and ceremonial occasions generally. Thus growing inspiration in the independent

instrumental field would take on the likeness of forms prevailing on such occasions as the above. Another instance of the influence of dance music is afforded by the ballet having been an early formative element in French opera. It seems far from improbable that to the long exercise and experiment in graceful movement involved in the cultivation of the ballet much of that piquancy and variety of idiom which is characteristic of the French school is due.

When we consider that in dance music little independent pieces were always at hand (or could be played from memory) in the house, it seems natural that they should have been the earliest forms of chamber music. It would have been a natural thing to play upon the lute, viol or clavi-cembalo the tune of a dance in which the player may have recently joined. Hence "suites" and the various features suggestive of the dance, in form, accent, or expression, which are so clearly visible in the highest extant examples of instrumental music.

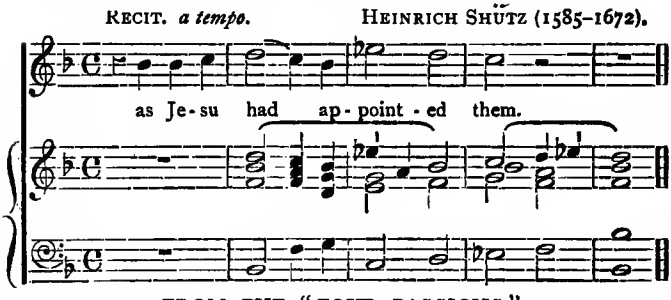
But instrumental music has been equally influenced by song, both directly and indirectly. Indirectly through the fact that dance music and ceremonial music naturally in their progress assimilated the general development as well as much of the feeling

and expression of vocal music through being so closely connected with it. Directly in that it received from vocal music certain definite forms—as, for instance, from vocal imitative polyphony the organ fugue, and from the choral, further and freer organ effect. Thus also from the madrigal and part-song descended the primal instrumental quartet; and from the vocal solo, such pieces as meditations, nocturnes, reveries, rhapsodies, etc., which in their many and varied characters have a peculiarly idealistic expression.

To resume the subject of accompaniment, I have shown that by the period of Alessandro Scarlatti two general kinds of accompaniment had unfolded, both more or less intermingling but clearly distinguishable, the function of one being mainly the support and enhancement of the melody by chords, sustained or broken, that of the other, the fuller expression of the melody by an accessory strain. The first kind is illustrated in the example from Rossi and may be regarded as belonging to that type of accompaniment which, whatever form it takes, is in its main office basal. The second is illustrated in the example from A. Scarlatti and, as I have said, is an accessory melodic articulation. By continuing to trace this latter kind we shall find that

it is a strain of development that passes into the highest forms, not only of vocal but instrumental music.

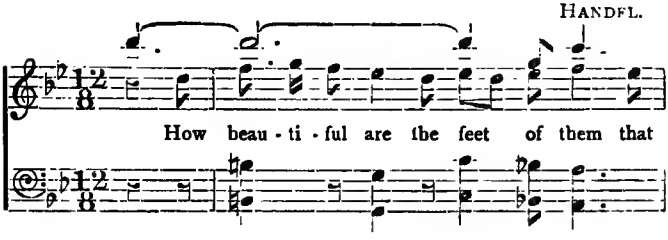
In the third and fourth bars of the following example from the work to which I have so frequently called the reader's attention, the "Four Passions" of H. Shütz (which would be some half century anterior to the period of A. Scarlatti) the reader will observe in the upper part of the accompaniment a feeling for the kind of effect I am speaking of.



FROM THE "FOUR PASSIONS."

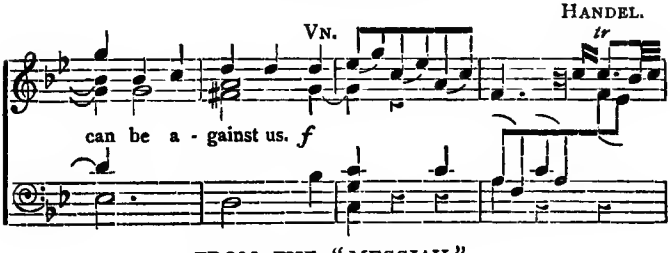
The reader will observe that where this kind of effect comes in in the example from A. Scarlatti (at the second syllable of "Figlio") it, as it were, only prompts or anticipates the resumption of the melody, but if we pass to the period of Handel we shall find it in far more marked evidence. In the following example it occurs towards the end of the accessory articulation

which, though in this case illustrative, gives rise (where the words "of them" occur) to an independent and quite peculiar beauty.



FROM THE "MESSIAH."

The following extract illustrates a kind of accessory articulation which does not intertwine with the original melody but, as it were, answers it antiphonally, and whilst in form quite distinct from the vocal part is also the main musical expression, the vocal part being almost purely declamatory.



FROM THE "MESSIAH."

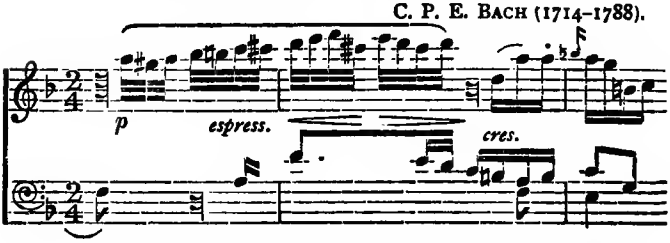
There is thus the following distinction between the

first two of these three examples and the last: that whereas in the last the accessory articulation is semi-independent, having almost a distinct function—that of musical comment or interpretation—in the first two the original and the accessory articulations are closely *complementary* in expression.

Now the latter kind of effect I regard as a special feature in musical development, and I term it "counter melodic effect" as distinguished from ordinary counter theme, its use being the above *mutual enhancement* of themes, involving an ineffable beauty and completeness of expression.

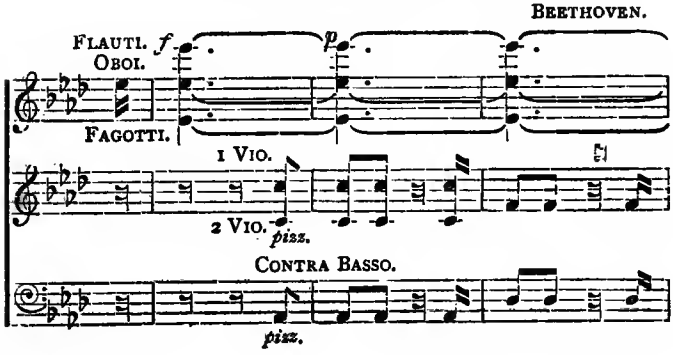
This kind of effect also appears in instrumental music. From its employment in the slow movements of Carl Philipp Emanuel Bach (1714-1788), where it is continually breaking out of the ordinary counterpoint, it would seem that it was in distinct evidence in the instrumental music of his period. In fact, here, as in the case of M. A. Rossi, the example supposed to be initiatory has a certain character of ripeness and freedom in manipulation suggestive of the style of effect to which it refers having been some, if not a long time, in vogue. In the following extract, at the beginning of the principal subject

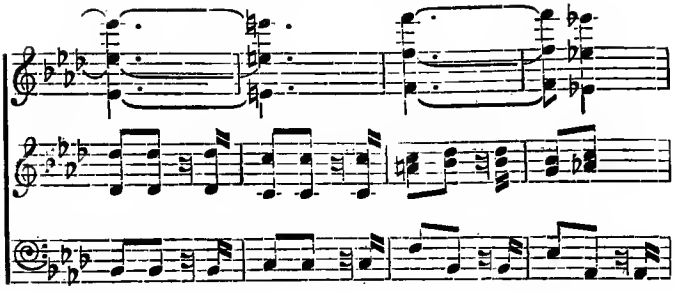
(where the accessory articulation is largely ordinary counterpoint) it is only in partial evidence, but it is clearly defined towards the end.



FROM SONATA IN A MINOR (SECOND MOVEMENT).

Counter melodic effect is a subtle influence in the magic of Beethoven; it is in fact the most delicate implement of expression for the composer who can handle it that the art has hitherto unfolded. In the following extract, for instance—where the F descends to the E-flat—it is conjured up in ineffable beauty.



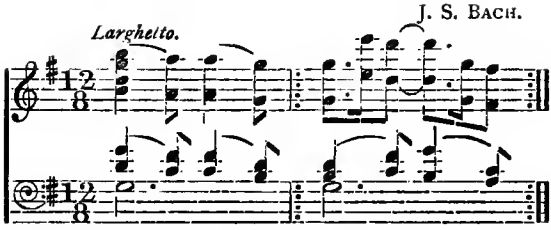


FROM ANDANTE CON MOTO, FIFTH SYMPHONY.

From the two types of accompaniment I have been describing, in the first of which the accessory articulation is an interlude, in the second a counter theme, there shade off two others,—from the first, an interlude illustrative of the spirit of the principal melody but less an essential part of it;* from the second, that in which the basal accompaniment or a counterpoint connected with it is carved throughout into *figures* more or less emblematic of the general expression.

Both of these are copiously illustrated in J. S. Bach. The latter type is perhaps the more important of the two as the former is often a kind of play upon the harmony, filling up organically occurring intervals of the time. The following example, however, is an instance of the former type of accompaniment conferring in a very high degree the element of charm.

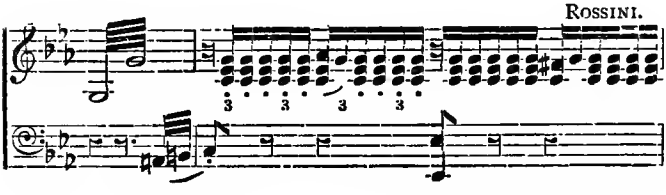
* Than in the case of pure counter melodic effect.



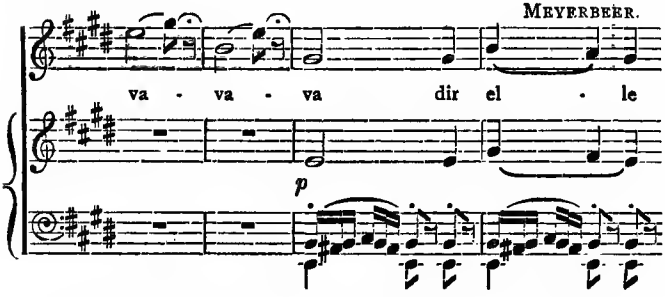
FROM CHORAL "WITH ALL THY HOSTS." CHRISTMAS ORATORIO. (INTERLUDE BETWEEN FIRST AND SECOND LINE.)

Just to touch in conclusion upon a few examples in the modern period, I may cite how felicitously Mendelssohn employs the figured or emblematic type of accompaniment in some of his choruses—as, for instance, "Happy and Blest," in "St. Paul," and "He Watching over Israel," in "Elijah."

That part of the accompaniment to the "Inflammatus" in Rossini's "Stabat Mater," in which the following figure occurs is also a vivid instance of this kind of effect, being suggestive of a trembling and terror in the atmosphere.



In the following example from Meyerbeer the figure recurs irregularly, giving a certain portentous suggestiveness.



FROM "VA DIT ELLE" ("ROBERT LE DIABLE.")

These last two examples may be somewhat out of fashion in the wave of present taste, but the first proceeds from primal inspiration whilst the second is at least organically prompted. Both have thus a deeper source than ordinary descriptive effect, the occasion for which passes so much music nowadays.

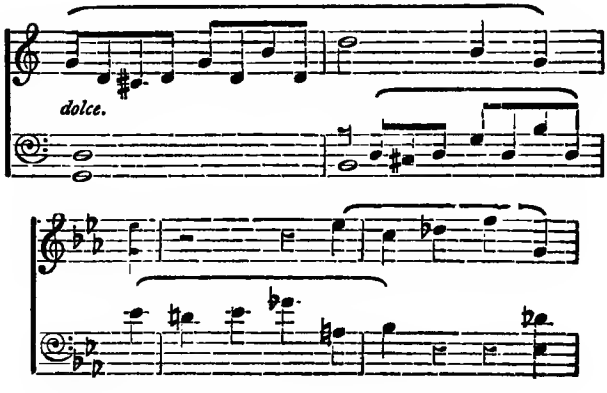
CHAPTER XX.

THEMATIC TREATMENT.

IN our previous chapter I referred to the fact that instrumental music at the beginning of its independent development took on largely the forms and characters of dance-music and song, giving to the various features of these latter far greater scope. In the instrumental field there would obviously be no curtailment of effect through the limits of the human voice; both melodic and rhythmic effect would have more play; whilst effects special to instrumentation would enter. But freedom alone does not always make for art, which being an object of human feeling and perception, must possess some particular form. The problem of the composition of an instrumental movement was to combine variety and important dimensions with unity. For a time this was effected by the fugal principle being

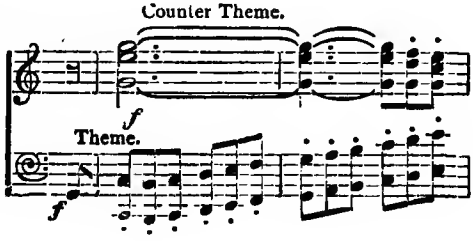
largely adhered to. But about the period of J. S. Bach and Handel this principle was, in the field of chamber music, passing into another which has been named *thematic treatment.*

In thematic treatment the composer first consummates a theme or subject as in the case of a fugal structure, but with a more extended view. On this method the *subject* is so conceived as to be fitted for far more varied treatment than that arising from literal imitation whilst in the finer examples it is suggestive, so to say, spiritually as well as materially. The following examples from Beethoven will render clear this method of construction. I draw them from the *sonata* because whilst the principle is particularly compact in that form it is virtually the same as in the symphony.

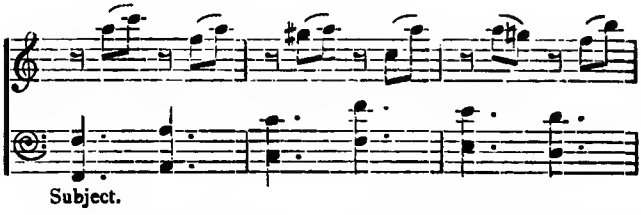


The two foregoing extracts involve simple imitation.

In the following example counter-theme is so conformed as to embrace the freer resources of instrumentation.



Free counterpoint is an important element in thematic treatment, as in the following example:—

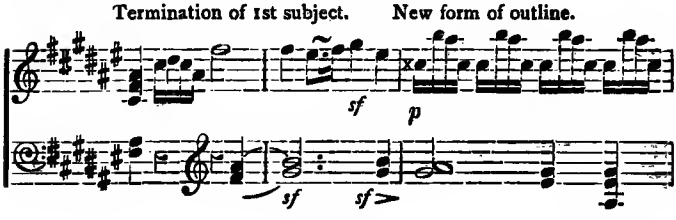


Counter-melodic effect (as exemplified in the extract from Beethoven in the previous chapter) is also of course a most important element in thematic treatment.

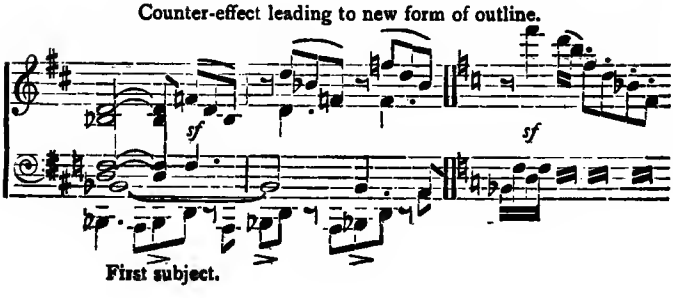
In this method, however, as thus far illustrated, it will be observed that the effect to which the subject gives rise is still connected with it through some form

of the art of counterpoint, the only difference being that the conditions are such as to permit wider range and more varied form in the passages, and more enlarged scope for harmonic and rhythmic display, than in vocal music. But the ensuing examples show that subsequent effect may on this principle be connected with the theme by other and subtler liens than those of counterpoint pure and simple, as thus:—

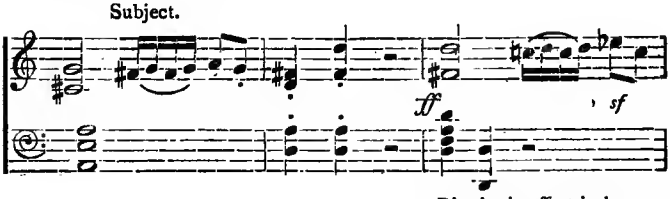
Where the subject gives rise to an onward flow of melodic outline different from it in character.



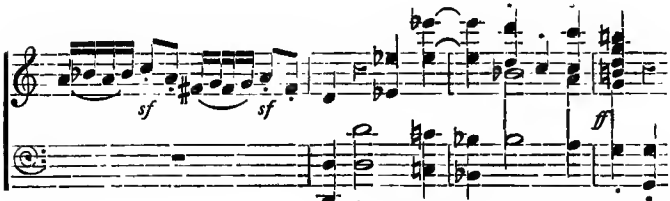
Where counter effect leads to a new form of outline.



Where rhythmic effect alone, borrowed from the subject, leads to new effect.

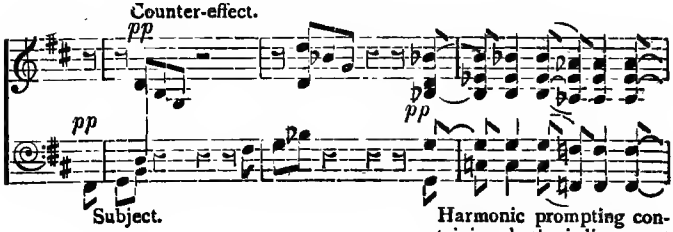


Rhythmic effect in bass, suggested by last two notes of subject.



The same rhythmic effect with counterpoint in imitation.

Where harmonic prompting having independent effect is connected rhythmically with the subject.



Subject.

Harmonic prompting containing rhythmic lineament of subject.

The last extract, and that from Beethoven in the preceding chapter relating to counter melodic effect, may be regarded as exemplifying that deeper suggesting of the subject to which I have referred as belonging to this principle of work. We are here again in contact with that principle of continuity in musical development that has been so largely visible in the course of this investigation. We see that that beautiful and varied world of new creation which is immediately unfolded by thematic treatment is vitally linked to the far back infantile strivings of descant.

The foregoing illustrations are of course only a few out of many ways in which the most varied forms of effect are by this method caused to unfold connectedly and, as it were, from a common nucleus. In the case of the orchestral work it is applied with far greater freedom. The treatment is not confined to passages suitable to one instrument or to a particular kind of instrument. This freedom alone gives immense enlargement of effect both as regards form and character, as it multiplies greatly the composer's facilities for connecting with his theme new forms of outline, that is to say of bringing into the field a far fuller assemblage of beauties—it is in fact obvious that in the use of

this principle by the orchestra the powers of both melodic and harmonic effect are immeasurably heightened, every form of instrumental concerted effect is rendered possible and every variety of rhythm rendered definite, whilst the resources of the always remarkable power of antiphonal effect are infinitely greater than in the case of one instrument or a few instruments.

I referred a short space back to the special importance, in the case of thematic treatment, attaching to the conception of the *subject*. How in great examples the subject is so conceived as to form, as it were, the nucleus of such extended and deep expression perhaps cannot be altogether explained. But looking at the matter on the surface the fact appears to be that in almost any fragment of wordless melody there is a remarkable vital instability—to take an expression from the physical realm—that would enable the versatile composer to connect it organically at some point (aided perhaps by a slight modification in rhythm, melody or harmony) with new effect either in proceeding from the subject or coming back to it.

Whilst there is thus in thematic treatment a travelling further into the pure sound world the fact that it reflects perceptibly the forms and methods of vocal

music still gives to the general effect a certain dialectic character. Thus in some of the great symphonic movements of Beethoven we feel as if the shadow of man were projected upon the mystic tone world much as that of the early priest of nature was upon the then strange world of natural phenomena.

CHAPTER XXI.

THE INTRODUCTION INTO THE ORGAN OF THE INTERMEDIATE SEMITONES.

IN tracing the structural development of music I have, because that development is so continuous, been obliged for a time to leave aside a subject of great importance and interest, that is, the introduction into the organ of the intermediate semitones after B-flat (referred to as the "lyric semitone" in Wulstan's description of the organ erected in Winchester Cathedral by Bishop Elphege, who died 951).

Now between this period and that of the erection of the organ in Halberstadt Cathedral, which Pretorius states was finished on February 23, 1361, these remaining intervals of a semitone had been (probably gradually) introduced. As I have said, I think it probable that even apart from the impulse to modulate which must sometimes have visited players upon instruments

of the viol and lute type (in which access to the intermediate semitones was always mechanically available) the necessity in accompanied song of that occasional transposition which has always existed in unaccompanied, would have led to the use of these intervals. How they became a definite portion of our system is a very interesting question which I shall enter into more fully in the next chapter. Certain of them would probably first be improvised by the singer or player, then be preserved by tradition or sign until they entered into the technique of instruments in which intonation is free, or into the construction of those in which the sounds are fixed. Whether the first of these latter was the organ, large or small, or the Clavi-cembalo, can only be conjectured. The earliest definite evidence of the existence in our system of all these intermediate notes is that referred to at the outset of this chapter, namely, the clavier of the Halberstadt Organ as described by Pretorius. The Clavi-cembalo appears from the beginning of the fifteenth century, whilst the Regal or portative Organ was in vogue during that and the following century. Both therefore would be in use about the period of the erection of the Halberstadt Organ.

Then we have to consider that—as I have previously remarked—the art would be generally more active in the popular atmosphere (in which the smaller instruments would principally figure) than in the Church. In this connection it is pertinent to introduce the following valuable and interesting piece of information given by Alfred James Hipkins in his article on the Key-board in Grove's Dictionary. "There is a painting by Memling in the hospital of St. John at Bruges (from which it has never been removed) dated 1479, wherein the key-board of a regal is depicted exactly as we have it in the arrangement of the upper keys, in twos and threes, though the upper keys are of the same light colour as the lower, and are placed farther back."

The following are some definite particulars of the key-board of the Halberstadt Organ.

There were three claviers.

The keys of the upper were lettered as follows:

CHROMATIC ROW.

C♯ E♭ F♯ G♯ B♭

B C D E F G A B

DIATONIC ROW

The keys of the middle clavier bore the same letters but the B flat was absent.

The keys of the lower clavier also consisted of eight diatonic notes and four chromatic, embracing the compass of an octave (B to B) but the notes were unlettered.

The upper clavier gave the full organ.

The middle clavier acted upon a single row of pipes.

The lower clavier governed the lowest bass pipes.

The keys of the upper and middle clavier measured four inches from centre to centre. The rows of chromatic keys were so raised as for their surface to be about two and a half inches above that of the diatonic keys. The chromatic keys were two inches in width, one inch in thickness, and had a fall of about an inch and a quarter.

I may in this connection repeat the following definite evidence: that towards the end of the next century the keys of the Organ had been reduced to nearly their present size. At that period, in the organs of the Barefooted Friar's Church at Nuremburg, the Cathedral at Erfurt, and the Collegiate Church at Brunswick, the keys were of such a width that an octave was brought within a note of its present span.

Notwithstanding the resemblance in principle between the form of the clavier of the large organ at the period of the Halberstadt organ, and that of the

Regal or the Clavi-Cembalo, the respective claviers of the large and small instruments may still have developed separately. The principle of horizontal keys placed parallel to one another and balanced or *returning* though not adopted generally in organs till about the eleventh century seems to have been known as early as B.C. 160. This is to be inferred from the descriptions of the organ that have come down from Hero and Vitruvius. From these it appears that Hero applied to the rulers or slides of the organ (by means of which the wind was admitted to, or shut off from, the pipes), key-cranks, with springs one arm of which projected horizontally in order to be pressed down by the finger or hand while the other projected downwards, the pressing down of the former arm (which corresponded with our key) causing the ruler to slide until its perforation came vertically beneath that of the pipe, while upon the pressure being removed the spring compelled the arm to rise and the ruler to slide back to its former position.*

* This principle of horizontal balanced keys being known to the ancients has been confirmed by the discovery of a terra-cotta model of an organ at Carthage of which photographs are in the possession of Miss Kathleen Schlesinger. Some interesting remarks on this subject are to be found in an article on the Hydraulic Organ of the Ancients by John W. Warman in "Proceedings of the Musical Association 1903-1904."

The placing the chromatic keys in their places in relation to the diatonic keys might, of course, have occurred independently in the large and small instruments, and as regards the level of the former being above that of the latter this also may have been an arrangement suggested independently by the circumstances different as these were in the two cases; for whilst, to take the Halberstadt organ, the size of the keys in the large organ was as has been described, in the Regals and Clavi-cembalo it was much as it is in the modern piano. A. J. Hipkins states that the space of eight keys of the key-board of a Ruckers* harpsichord measures but a small fraction of an inch less than an octave of a Broadwood or Erard Grand of the present day. He makes further the suggestive statement that there is reason to believe that the little portable organ or regal may at first have had a key-board derived from the T-shaped keys of the Hurdy-Gurdy.

But however its design became suggested, when

* Flemish arpsichord makers; established at Antwerp by Hans Ruckers, b. Mechlin (1555). The instruments of this firm, which are as a rule decorated with paintings and now very rare, date from between 1579 and 1667.

the necessity arose for the introduction of chromatic keys into the key-board of the regal, clavi-cembalo or spinette (whether one or more of the new keys were introduced at a time) the difficulty would be how to introduce them without interfering with either the span of the octave or the width of the diatonic keys, the retention of both of which would be demanded by the established technique of those instruments. As we know, this difficulty was overcome by taking space from the length and width of the diatonic keys (starting some distance from their front) and placing in it the narrower and shorter chromatic keys, at the same time raising the latter above the level of the diatonic as otherwise there would not have been room for the fingers to depress them or, easily, to find them. Thus the problem was ingeniously solved and that unique contrivance—so simple yet so profoundly suggestive—the modern key-board perfected. How important its influence has been on the development of modern music will appear in the two following chapters. Yet it is a remarkable fact that at the period I have been treating of though the key-board was achieved, and fulfilled a certain function, its use was but dawning, and the day of that dawn was undreamed of. It has been much the

custom to look down upon the key-board as an aid to theory, but in the light of that full development of our system of enwoven scales of which it but inaugurated the beginning, it is musical history and theory embodied. Through sight, touch and ear it is associated with both the structure and inter-relation of those scales: in the picture, the feel and the sound of the keys, which it gives to us it is a standing object-illustration of that fundamental differentiation of the continuous semitonal basis, upon which modern music rests.

CHAPTER XXII.

THE CONNECTION BETWEEN THE DEVELOPMENT OF VOCAL MUSIC AT THE EARLY FLEMISH PERIOD AND THE PLAN OF THE CONTEMPORARY ORGAN.

MATHEMATICAL science initiated and guided by æsthetic feeling, has fixed the relations of the notes in the typical scale—that is our scale in just intonation—as follows:

Do	Re	Mi	Fa	Sol	La	Si	Do
8-9	9-10	15-16	8-9	9-10	8-9	15-16	

These relations, as I have said, were ultimately decided by Ptolemy in the second century of our era, but the system of Pythagoras still held until they were rediscovered by Zarlino in the sixteenth. They have a scientific foundation in the relations 4, 5, 6, in arithmetical progression, which are also the relations of the

common chord in its simplest form. If we superpose three common chords so that the top note of the first is the root of the second, and the top note of the second the root of the third, we obtain a series of seven different sounds which, being arranged in order of pitch and brought within the octave beginning with the top note of the first triad, give the first seven notes of our scale in perfect intonation. Thus the common chords of the subdominant, tonic and dominant (each of course representing correctly the relations 4, 5, 6), being arranged and reduced as just described, give with the addition of the octave of the first note in this arrangement, all the intervals of our scale in perfect intonation. It is necessary to begin on the subdominant because only on this degree can three common chords in the same scale be superposed.

As regards the arrangement of the scales in our system, the reader knows that starting with any scale the next in order is that formed on the fifth degree either ascending or descending, and that commencing on either of those degrees the scale that follows is precisely like the first as regards the succession of tones and semitones if, in ascending, a new note is substituted to form the seventh, or in descending,

the fourth, of the new scale. Now with regard to the succession of the large and small tones, the new scale will also tally with the old except at one point. In forming, for instance, the scale on G, starting from C, we want a large tone between the first and second degrees, that is between G and A; but between these notes in the scale of C the interval is a small tone. A new sound has thus to be substituted for this A, namely, A raised a comma. So; the sixth of the scale on F demands a sound a comma lower than D of the scale of C,—a large tone being involved between C and D in the scale of C whilst between these notes in the scale of F a small tone is required. Now it is clear, these new notes are demanded on the same principle that F-sharp and B-flat are demanded in forming the same scales, that is, the principle of making the new scales tally exactly with the old. But there is this difference between the two cases: whereas in the latter, the difference between the old and the new sounds is a musical interval, in the former, it is not, the interval, for instance, between F and F-sharp may enter into a musical construction but that between A and A raised a comma cannot.

This slight incursion into the structure of the typical

scale and the relations involved (between the old and new scale) by its transposition a fifth up or down, will bring before the reader some of the theoretic circumstances which beset the composer at the beginning of the overlaying of the scales.

Whatever theorists and acousticians may have done it seems clear that the pioneers in polyphony were led into the various scales by æsthetic feeling. A glance at even the few examples which I have given bears this out. Thus there seems scarcely any doubt that F-sharp was first introduced in practical writing in some phrase where it was leading note of G minor, as between the second and third bars of the example from Dufay; and C-sharp where it was leading note to D minor, as between the fifth and sixth bars of the example from P. de Monte. Then E-flat was probably introduced as third of C minor or it may have been introduced as fourth of B-flat, in both of which capacities we see it in the example from P. de Monte (second and third bars).

Now the scales suggested by the nomenclature of the keys of the Halberstadt organ correspond generally with the scales mentioned above. They would be the

foregoing scales with the addition of that of A minor, to which the key marked G-sharp probably points.

It would seem, therefore, that notwithstanding all the scales may seem to have been, so to speak, blocked out by the key-board of the Halberstadt organ, those actually existent in musical practice were C and F major, G and D minor, with perhaps A minor and C minor. In this connection the following quotation seems apt. The late Sir John Stainer as a result of his examination of the *MS. Canonici misc.*, 213, in the Bodleian Library, Oxford, which has recently come to light, says, referring to Dufay and his contemporaries: "These pages show that the key of C had already become firmly established. Some few write very definitely in the key of F. Examples of D minor are less numerous. Attempts to settle in the key of G minor are generally very unsatisfactory; but Dufay who is always well ahead of his contemporaries gives us a movement in G minor containing a half close on its dominant D."

We should now glance at the facts that whilst the influence of the large organ upon the musical system has been thus shaping itself, the Portative organ and Clavichord have in virtue of being also instruments of

fixed sounds been exerting an influence of the same character and which (through the closer touch of these smaller, more easily constructed, and more numerous, instruments with every ripple of the art-stream) may have been some steps in advance. And we should further observe that side-by-side with the above instruments of fixed sounds the Viol, which at the period of the capital of St. George's Church, Bocherville (11th century) was prominent among the instruments used to support the voice in choral singing, has been developing. Thus soon after the completion of the Halberstadt organ viols of different compass begin to be heard of corresponding to the different voices. Edward John Payne* states that the construction of the viol type of instruments with corner blocks and in various sizes, were contemporaneous with the great development of polyphonic choral music in Germany and the Netherlands in the 15th century.

Now, of course, the viol is as free as the human voice to observe just intonation. So that at the general period of Dufay there would have been existent two bases of composition both derived from the typical scale yet not

* In his article on the Violin in Grove's Dictionary.

quite identical: one (as represented by the organ and clavichord) an extant system of fixed sounds, the other (as represented by the vocal choir and viol) an ideal yet living system plastic to æsthetic feeling.

At the same time there can be no doubt that these two bases were always somehow in touch. At the period of the plain chant this and the scale of the organ would have been in touch, whilst at the time I am treating of, not only would the key-note of a choral movement have been in unison with (or regulated by) some one of the notes of the organ or clavichord but the general form of every vocal composition would probably have been representable by the sounds of those instruments.

Now the use of the scales which I have mentioned as suggested by the nomenclature of the chromatic keys of the Halberstadt organ—that is C and F major, G and D minor, C minor and A minor, did not involve practically a very great departure from just intonation. Assuming the scale of C to represent the typical scale, that of A minor would be in just intonation. So would C minor if the major sixth were employed. Then F major and D minor would be just except that the D common to both should be a comma lower than

in C. And G minor would be just except that the G* should also be a comma lower than in C. All these departures arise from the non-tallying of the large and small tones—and here we come upon the beginning of the untrue intonation of instruments of fixed sounds. But in harmony with my remark at the beginning of this paragraph, at this point the departure was not found to be inconsistent with the practical use of the enwoven scales. It was in attempting the introduction of A-flat, D-flat, D-sharp and A-sharp that the difficulty of getting all the scales into the organ, using only twelve divisions of the octave, became acute. Now there may have been a reason for this beyond the absolute fact that mutation between the contiguous sharps and flats would have involved false intonation. It seems probable from the connection observable between the use of sharps and flats in the early Flemish compositions on the one hand, and the nomenclature of the chromatic keys of the Halberstadt organ on the other, that the sharp keys were first introduced as *leading notes* and the flat keys, some as minor thirds, and some as fourths

* As it would be the sixth of B-flat major.

of their scales. Now assuming the scale of C to be in just intonation, let us suppose it was sought to introduce A-flat as fourth of E-flat; then, if the attempt were made to cause G-sharp (already in the organ*) to function as A-flat (as the G-sharp and true A-flat would necessarily overlap†) the semitone between the third and fourth of the scale of E-flat would be diminished; so, supposing a true A-flat were introduced and it were attempted to cause it to function as G-sharp, then the distance between the tonic A and its leading note would be lessened. Of course, the same would be the case as regards the other contiguous sharps and flats. So it may have been that it was largely because the false intonation affected such sensitive intervals of the scale as the *third and fourth* and *seventh and eighth* that when A-flat, D-flat, A-sharp and D-sharp came to be dealt with it was found that mutation could not be satisfactorily effected. How long this difficulty lasted in the construction of the organ is evidenced by the following facts: (1) In the organ built by Father Smith in 1682-3 for the Temple Church two of the black keys were divided crosswise, the front and back halves of one

* As leading note to A. † See p. 372, line 8.

playing respectively G-sharp, A-flat; of the other, D-flat, C-sharp—the back halves rising above the front halves. (2) In the key-board of an old organ of the Foundling Hospital there was a special mechanical contrivance by means of which D-flat, A-flat, D-sharp, A-sharp, could be substituted for C-sharp, G-sharp E-flat, B-flat. The above additional notes were first heard of in 1799.

We have seen then in this chapter that that interweavement of scales which is organic in the works of the early Flemish composers was formulated in the plan of the contemporaneous organ.

That notwithstanding in the 14th century all the chromatic keys were present in the organ they were there as concerned with only a few scales.

And that the scale-enweavement in use at that period did not involve a material departure from just intonation.

In the following chapter I shall attempt to show how greatly the organ though only reflecting the principle of scale-enweavement to the above limited extent, was, with its related instruments, destined to react on the development of that principle.

CHAPTER XXIII.

THE CREATIVE CONSEQUENCES OF THE CLAVIER TYPE OF INSTRUMENTS.

WE have recently seen how the early Flemish composers by being led to adopt various degrees of the primary diatonic scale as new bases of composition, or in a natural impulse to modulate, took into their melody or harmony beyond the traditional B-flat, the remaining intermediate sounds. We have also seen that as this went on, the organ (in which from a very early period the diatonic scale was objectively extant) gradually took in these intermediate notes. Now the development of an instrument of fixed sounds side by side with the progress the art had made at this period, constituted one of those fateful touches of circumstance to which

I have so often referred, for it was vital to the art's unfolding a new order of effect.

There can be little doubt that the key-board from its very earliest use in both organ and clavichord induced a certain style of composition and a technique of playing, peculiar to each instrument; and that as time went on invention and execution in the paths thus defined would have become gradually somewhat more elaborate. This, however, would be in the natural course of things. But the new paths of composition that were thus opened up led (as true development always leads) to the unexpected and creative. When ultimately mutation became effected between those additional sharp and flat notes referred to in the previous chapter, which (having in the vocal domain been arrived at from opposite directions) did not before quite coincide; and the respective paths of progression by sharp and flat keys thus met exactly, and joined, the consequent homogeneous enweavement of all the scales, and continuity of the whole system, led to effects in both melody and harmony before undreamed of. But the discovery of these effects, if not the effects themselves, may be perhaps partly explained. Whilst the system was fuller because it was one,—that is, because its various

parts were joined,—the composer's grasp of it was peculiarly facilitated by means of the key-board. More particularly were his powers increased in the exploration of harmony, which by a choir or a quartet of viols cannot be improvised, but on an instrument with a clavier, can. Further the resources of the key-board induced the construction and permitted the playing of more finely complex forms of combinative writing than could be conceived for, or executed by, a choir.

Some of the larger consequences of the above, so to speak, interior culture of the art stand out in musical history. One is, that early cultivation of organ playing in Germany which reacting upon vocal composition initiated the great German school of Part-writing. Another is, that peculiar method of treatment (thematic) which, as explained in a recent chapter, was destined to lift abstract instrumental music to the highest level of expression. Whilst a third is, that peculiarly beautiful and striking kind of effect which is produced when ordinary progressions in melody or harmony embrace widely removed keys, as exemplified in our chapter on modulation.

The incalculable influence of chance in general, or as manifested in genius, had no doubt much to do

with the above results appearing when they did. It may, however, perhaps be regarded as suggestive that the two last appeared about the time, or soon after, equal temperament (the basal division of the octave into twelve equal intervals) was accepted.

The adoption of equal temperament began in Germany,—whose composers also took the lead in developing that process of thematic treatment to which I have just referred as well as in the fuller and deeper unfolding of harmony which is such a salient feature of modern music. One Werckmeister, who in 1645 was an organist at Quedlingburgh, wrote a work entitled "Musical Temperament," which was published in Leipzig and Frankfort in 1691. Then John Sebastian Bach, as is well known, applied equal temperament to the Clavichord for which instrument his son, Karl Philipp Emanuel, advocated its adoption in an important treatise. It may be added as perhaps also suggestive of the influence of the completion of the unification of the system, that in the sonatas of K. P. E. Bach for the clavichord (by which works Haydn in his youth was so strongly moved) the principle of thematic treatment is found in distinct development.

Photo, F. Hanfstaengl.

LADY AT THE CLAVIER.

FROM THE PAINTING BY JAN MIENSE MOLENAER IN THE RIJKS MUSEUM, AMSTERDAM.
(DATE OF BIRTH UNKNOWN, DIED IN 1668.)

Facing page 369.

CHAPTER XXIV.

THE PROBLEM OF THE USE OF OUR SYSTEM OF ENWOVEN SCALES IN CONNECTION WITH JUST INTONATION: THE PSYCHIC FACTOR.

FROM the particulars I have given recently of the relation between the notes of the Halberstadt organ and contemporary compositions it is abunddantly clear that the musicians of this period did not attempt to observe *de rigeur* the distinction between the large and small tones. Yet this very departure from just intonation—such is the latent insight of æsthetic feeling—led to the highest achievements of modern music.

The explanation would seem to be that as in the minds of the early experimenters in Descant the feeling

for fuller form dominated the sense of the hardness and discord which it largely entailed, so in the early Flemish composers the prompting for increased effect over-rode their feeling for pure intonation. At all events they made directly for more highly organised form and this, as we have seen, led to the connection of the different parts of the system and thus to its also becoming organic in so far that it became *outwardly delimited, inwardly continuous.*

It will be remembered that, as I remarked recently, whereas in our present system at each remove of a fifth up or down the two scales correspond except in the case of a single degree of each, in a system under just intonation two degrees would fail to be interchangeable. Thus whilst at the third remove up in our system there would still be four notes common to the scales of C and A, at the same remove in a system under just intonation there would only be one. Of course, at the next remove, up or down, whilst under the latter system there would be no notes in common in ours there would still be three.

A moment's consideration of these facts betrays how rapidly just intonation carried out strictly makes for disintegration of the system. But a full considera-

tion of them by revealing this fact in detail necessarily impresses it more graphically.

In the very ingenious and earnest attempt of Colin Brown to devise an improved practical system such a full consideration is given; I therefore select from it a few points as representing some of the more striking consequences which attach to a system based on just intonation.

(1). The second degree of each major scale is a comma higher than the sixth of the scale of its subdominant. Thus the tonic of the relative minor of F would be a comma lower than D, the second degree of C. From this the following two points result.

(2). The major third of the sixth of a scale cannot be used as leading note to the second. Thus the major third of A as sixth of C does not lead to D the second of C but to D the sixth of F.

(3). The tonic of the scale three removes ascending (say, of A, starting from C) is a comma higher than the sixth of C. Thus A major in the regular progression of the scales from C is based on a different sound from the tonic of the relative minor of C.

(4). The tone is scientifically divided. If one division is used as a diatonic semitone (15-16)—as

when F-sharp is leading note to G—the other cannot be so used as it can only contain the relation 128-135 which with 15-16 exhausts the tone F-G (8-9). This smaller division Colin Brown terms the chromatic semitone.

So A—B-flat being a diatonic semitone, B—B-flat is a chromatic semitone.

(5). When the *small tone* (9-10) is so divided as for one division to be a diatonic semitone—as when G-sharp is leading note to A minor—the other division can only contain the relation 24-25 which Colin Brown terms an imperfect chromatic semitone.

Thus besides two kinds of tones (the large and the small) there are in this system three kinds of semitones, the diatonic, the chromatic and the imperfect chromatic.

Involved in all the above consequences is the following principle of this system: *no interval stands for another however slight the difference.* Now as in our system there is mutation respectively between every tone and every semitone the acute contrast of principle between the two systems here comes out clearly. The almost opposite practical results are almost as distinctly apparent; whilst the accommodated intonation

of our system makes for the close connection of the scales just intonation works away from that very result —that close union of the different parts which, as we have seen, in our system it has been the work of time, genius, and chance to conspire to bring about.

I should add the following concerning Colin Brown's system in relation to actual music.

In the case of a piece confined to one key each interval is represented in a simple and regular way But in finding the intervals answering to a piece that passes into another key we should have occasionally to choose between sounds a comma apart. This necessity renders the system in question (or any system involving the division of the tones into large and small) under certain circumstances quite inapplicable to actual music. These circumstances are liable to occur when a melody modulates into the dominant or subdominant. Say a melody modulates from the key of C to that of G and is so constituted as to demand an enharmonic connection between the sixth of C and second of G. The key of the sound involved at first clear (as C) might become for a time undefined or ambiguous and then become clear again (as G). Or suppose the sound at

this place instead of being continuous recurred at intervals, then if when the new key became established the *just* note (say A raised a comma) were introduced the effect of two sounds (say A and A raised a comma) so closely succeeding yet differing only by a comma would be distinctly unmusical. The reader may find an illustration of these remarks in the simplest melody. In these particular circumstances our system seems the only practicable one.

Then sudden modulation between keys four removes apart, as between C and E, cannot find foothold in Colin Brown's system without the use of *auxiliary scales* for the reason that two keys thus related instead of as in our system being separated by a major third are in his separated by a major third and a comma.

Of course, the broad explanation of these differences between the systems is, that whilst Colin Brown's is (saving the single typical scale on which it is based) dominated by the principle of strict mathematical uniformity, ours is governed altogether by æsthetical effect.

And yet it is indispensable to our system that the

scales which form it be something less than perfect in their intonation, for, as we have recently seen, scales true to the perfect type cannot form a system so compacted as ours. This dependence of a new world of music (as that outbreak of creativeness may be called which occurred about the period when equal temperament began to be adopted) upon a system of scales not one of which is true, has puzzled many musicians and mathematicians.

There is one consideration that seems to have been lost sight of in discussing this matter. It is that the typical scale itself is a strong example of irregularity as regards the constitution of its elements. Thus, as we have just seen, we have first two kinds of tones; then each of these is so divided, that one division involves the relation 15-16—producing three kinds of semitone. Among other results of the two kinds of tones we have (as well as major and minor thirds), a grave minor third (consisting of a small tone and a semitone) as in the case of D-F in the key of C, and a small perfect fifth, as in the case of D-A in the same scale. Yet these various irregularities in the constitution of similar intervals are accepted as a necessary arrangement due to æsthetic

feeling. But when the same feeling indites effects based upon an arrangement of scales which demands the mutation of corresponding intervals differing by a comma that arrangement is demurred to as scientifically irregular! Why any amount of arbitrary interference (by the æsthetic principle) with scientific regularity should be accepted in the constitution of the typical scale and none whatever allowed in that of our system of scales (similarly justified by æsthetic results) is not apparent.

There seems then nothing unsound in the *principle* of irregularity in the intonation of the constituent scales of our enwoven system. This may go some way to explain the undoubted fact of a new musical creation of perfect beauty resting upon a system of which retrogression in the constituent scales is a vital condition, and in this connection we have further to consider that in actual musical effect only a portion of our system is brought into operation at a particular time. But perhaps a fuller explanation of the foregoing as well as of the distinctly successful result of the use of intervals in our system which are certainly a compromise, is the following. The various musical intervals are to us not simply sense-impressions but *perceptions*, that is

to say, they are based upon the comparison of previous sense-impressions. Thus, our impressions of a fifth, fourth and third, are the result of previous comparison of these and other intervals. Now it is well known that we may have a perfect perception based upon details which are imperfect—the sense-impression may be but a sketch which psychic action fills in, or a sign which psychic action interprets. This as every one knows, is largely the case with regard to our visual impressions, in which we frequently do not see all we think we see. It is also, as I submit, the case with regard to the intervals which our tempered system gives us. They are sufficiently near the truth to be by psychic action realised as true. Thus, the circumstances being appropriate, the semitone which that system gives may function as a diatonic, chromatic or imperfect chromatic semitone, and the tone as a large or small tone. The fact is, the psychic action involved in realising even the technical elements of a musical effect is immensely greater than it is generally supposed to be. We know that the most harsh dissonance is accepted by the ear and listened to with perfect equanimity if its reason is clear to the mind. So, on the same principle but in a far subtler way, in the

action of which I am speaking, the mind *imputes* to what is given to the ear that which is intended to be conveyed.

The foregoing considerations then would seem to throw some light on the remarkable fact that in the crude enweavement of the scales which the Organ and Clavichord at last embodied æsthetic instinct found the conditions of a new birth of effect unblemished.

CHAPTER XXV.

Concluding Remarks.

I HAVE traced the development of music from its primitive evidences to the point where modern art is constituted in virtual completeness—where it is in possession of those powers of which the newest modern effects are simply fresh applications. It has not been my intention to trace in detail the development of particular forms, such as oratorio, opera, sonata and symphony—though I have had to refer to certain important features in all of these. Counter-theme, Harmony, Modulation, Scale-enweavement,—these coming about would necessarily involve certain particular forms and lead to others, all being shaped more or less by circumstances and tradition. It has been the unfolding the above four vital developments that the real battle of the art has been about.

Since the period of Weber and Schubert there has been no important addition to the texture of musical effect. Mendelssohn, however, made a distinct æsthetic advance by breathing a new feeling in melody and a subtler expression in harmony, as well as by employing the latter in discord with peculiar boldness and strenuousness.

But there has been a new general application of music, involving a departure from the form in which it stands self-poised as in the Symphony and (notwithstanding the words) in the Song. Even in Beethoven's Ninth Symphony and the symphonic movements of Mendelssohn's "Lobesang," notwithstanding there is a large unity embracing both music and poem, the music is still organic in itself. But in this new application, the organic whole is not all musical. In the dramas of Wagner the large unity has ceased to exist in the music and the connective effect it involved is supplied by illustrative passages suggested by the literary text; it has, in fact, passed to the poem, involving thus far a return to the form of ancient Greek musical drama—but with the musical element containing the results of twenty-four succeeding centuries.

In this latter change there seems an increased recog-

nition of the power of music to create an atmosphere —almost the discovery that the principle of associating music with scene and circumstance—with, in short, a situation—may be carried further than it has been hitherto.* There can be no doubt that in the above change music's broadly illustrative power is more extensively exemplified, if not more deeply impressed, than it has ever been before. In the dramas of Wagner and the oratorios of Elgar the illustrative power of music is so deliberately and extensively drawn upon as to make that power the foundation of a style.

This rendering music more broadly illustrative has prompted a certain change in combinative writing. Themes are combined not in the first place for the sake of musical beauty but dramatic or illustrative effect. In this there has, in fact, been something like a return to polyphony (the wild in which the flowers of harmony were found) but in the light of extant harmonic development, with the result that on the whole the musical vocabulary has been rendered fuller and richer.

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* See statement of the principle of *arbitrary association* in "The Deeper Sources of Beauty and Expression in Music," p. 98.

A single broad glance over the course we have pursued in this work reveals as the salient feature in that retrospect our system of interwoven scales. This is the development which forms the main distinction between modern and all ancient musical art. Yet how much had to be done and to conspire for it to come about! The musical stream of the ancient world had to flow well into the Christian period. The Church had to spread among different peoples and races, enclosing everywhere a peaceful atmosphere, and forming as it were a many centred school tending to assimilate and formulate effects drawn from the varied and contrasted life without.

I have frequently reflected how remarkable it seems that so many vital departures should have been made accidentally or for some immediate purpose and in total blindness of their great consequences. Who would have anticipated that the gambols of Descant would have led to the threshold of harmony? Then, when harmony had unfolded, who would have anticipated its effects from the standpoints of removed keys?

It seems far from improbable that the determining factor in the great central development to which I have

referred was the rise of the Christian Church, in that, as I have set forth, whilst its ritual demanded regularly meeting choirs and the use of a practicable notation (circumstances almost indispensable for the development of harmony) it would tend to draw its musical expression from a many-sided outward life and diffuse it among the churches of different lands.

Looking at the many unanticipated developments that have occurred in the past, it is obviously dangerous to attempt to guage the scope of Music's future. There are, however, two circumstances to which I may refer that would seem to have a certain bearing on that scope. One relates to a peculiarity which Music has in common with architectural ornamentation. This peculiarity is the *fewness of leading forms* in the design. In architecture how many of the elements of the ornamentation are simply the large structural forms—such as arches, pillars, porches, alcoves, pinnacles and spires—in miniature! whilst in Music who can fail to notice at intervals the occurrence of effects which it is a great part of the composer's task to work up to in a new way—effects of such clear beauty and decided moving power that they seem necessary and

fundamental! The fact that in neither of these arts is the form drawn directly from nature may have something to do with this parity. It would account for the paucity of leading elements. At the same time, that in each case the suggestings of nature that do occur touch upon something generic or familiar in feeling, may tend to explain their power. That in Architecture the suggestiveness is of this character, is obvious; whilst in music the specially expressive of these effects would be largely those gracious lineaments of strains, that have come down upon the stream of song and proved the "touch of nature" in all time. It is certain that in Music (to confine myself now to this art), the above influence, at least, on the side of expression, will go on—breathing the feeling of its source, and thus forming a bond between the past, the present and the future. Indispensable as "a new way" is, let no would be composer imagine that music can shake off its past. It is the note of the past that gives the "spirit feeling" in music, and the touching that note belongs to inspiration.*

The other circumstance bearing upon the scope of

* See "The Deeper Sources, etc.," last paragraph.

Music in the future is the change that in these latter days has come over the relation of man to Religion. Here, again, the arts of Music and Architecture are largely similarly situated. Of course, no one can be unaware of the fact that Architecture has always owed a considerable portion of its inspiration and influence to Religion—this having supplied the incentive, the feeling, and the long pursuit of art of which the monuments of remote antiquity, the classic temples, and the mediæval cathedrals are results; whilst the special connection between Music and Religion is equally obvious to everyone. But Music in its relation to Religion stands in one respect in a different position from Architecture. The latter is related to man's serious life in other ways, but Music is not. Hence the special importance to music of this particular association. In contrast to the peculiar nature of Music's standing-ground in the ordinary world, involved in its ethereal form and intermittence, its *necessity* as a means of expressing the profound emotions of man in relation to the religious aspect of existence has been always the definite sanction of its recognition as a high and serious art.

It is, however, the broad parity of these arts in this

connection which is the pregnant consideration here. Both have rested long on the breast of Religion; from that breast they have drawn more largely than the other arts (with the possible exception of Painting), the moral and material elements of their life; now both are passing to a future in which the special enthusiasm which aided so greatly to create them seems destined—though it may never be lost—to become less concentrated and intense.

This work now terminated has, I hope, enabled the reader to perceive the true inwardness of Music's history—to note amid the multitudinous musical activity that has ever attended life, those vital departures which had to be made, those constructive chances and special developments, which had to occur for the modern art to come about.

INDEX.

INDEX.

Abbé Duchesne, 205.
Abyssinia, 71.
Accent, 113, 149, 189. (See Bar-lines).
Accompaniment, 126, 132, 151, 172, 321-38.
Adhelm (Bishop of Sherbourne), 148.
Adrian, I., 205.
Æschylus, 122.
Africa, 136.
African Instrument (Modern), 18.
Alamoth. A musical direction (Psalm xlvi. See also I. Chron. xv., 20), 41.
Alexander the Great, 123.
Alexandria, 60.
Alleluia (of the ancients), 66, 67.
Amalarius Fortunatus, 200.
Ambrose, St., 201.
Ambrosian Chant, 202, 203.
Ambrosian Collection, 238, 239.
Amsterdam à Cappella Choir, 211.
Andalusia (Songs of), 326.
Angelo, St., Cardinal, 110.
Anicius, 136.
Anno (German Bishop), 160.
Antiphonal effect, 59-63, 146.
Antiphonarium, 202, 204, 205.
Ape, 4.
Apollo, 82.
Apollo, Hymn to, 111.
Arcadelt, 248-50.
Archilochus, 83.
Architecture, 132.
Architecture, Analogy between Music and, 383-6.
Archytas, 97.
Aristotle, 98, 100, 101, 108, 122, 131, 163.
Aristoxenes, 110, 131, 133.
Artistic Song, The, 291, 319-20.
Asaph. A singer appointed by David. See I. Chron. xv., 19), 53, 57.
Asia, 12, 122, 136, 325.
Asiatic instruments, 123.
Asor, 64, 66.
Assyria, 79.
Assyrian (Monuments), 64, 78, 80.
Assyrian (Music), 14, 40, 64, 68, 69, 72-74, 81.
Assyrian (Mus. Insts.), 13, 65, 67, 71.
Athanasius, Bishop, 60.
Athens, 111.
Augustine, St. (His Confessions), 154.
Aulody, 87.
Aymeric (a scrivener, 10th Century), 165.
Babylon, By the Rivers of, 46.
Babylonia, Kings of, 79.
Babylonian Music, 13, 64.
Bach, C. P. E., 335, 368.

Bach, J. S., 315-16, 335, 337, 340, 368.
Barbary, 122.
Bardi, John, 295, 298.
Barefooted Friar's Church, Nuremberg (Organ of, towards the end of 15th Century), 350.
Bar-lines, 189, 213, 219.
Barrabras, 71.
Bede, The Venerable, 154, 204.
Beethoven, 249, 274, 335, 340-1, 344, 346.
Beethoven, His Symphony in C minor, 304, Ninth Symphony, 380.
Berbers, 71.
Birch, Samuel (Writer on Egyptian Hieroglyphs), 125.
Bocherville (Church of), 165, 166, 360.
Bodleian Library, 181, 359.
Brennus, the Gaul, 111.
Brown, Colin (His Musical System), 371-74.
Bruce, 15, 80.
Busnois, 260, 268.
Byron, 114-15.
Caccini, Giulio, 295, 300, 323, 328.
Cairo, 67.
Calliope, Hymn to, 110.
Canaan, 79.
Canon, 241-2, 248.
"Canonici misc" (MS. in Bodleian Library), 359.
Canzone Villanella, 292, 294.
Carissimi, 251-2, 262-3, 278, 306, 308, 311-13, 315, 320, 325.
Carthage (Terra-cotta model of organ discovered at), 351.
Cassidorus, 158.
Catacombs, 144.
Cathedral, Erfurt (Organ of towards end of 15th Century), 350.
Cavaliere, Emilio del, 295, 298-9, 323.
Cavalli, P. F., 304, 306, 323, 327.
Chansons of the Middle Ages, 321.
Chappell, William, 157.
Charlemagne, 148, 204.
Chartres, Cathedral of, 167-8, 170.
Choral (a Psalm Tune), 234, 331.
Chord of Dominant Ninth, 266.
Chord of Dominant Seventh, 255, 259-68, 270-2, 285.
Chord of Dominant Seventh (Its æsthetic power), 273-4, 280.
Chord of Imperfect Fifth, 244-6, 261.
Chord of Ninth, 246.
Chord of Secondary Seventh, 246.
Chords, 231, 244-6, 250-2, 256-80.
Chords, Complete and Incomplete (So-called), 257-8.
Chords (Their Historical Unfolding), 258-9.
Chorus, Greek, 120-1.
Christian Church (early), 144, 146, 148, 383.
Christian Era, 122, 147.
Christian Period, 141, 143, 148, 155, 161, 382.
Christians (early), 144-5.
Chromatic Effect, 124, 130, 165.
Chromatic Scale, 103, 131.
Chronicles II., Book of, 57.
Church, Music of the, 149, 156, 164-5, 209, 236, 248.
Cimbal (German), 65.
Cithara, 82, 86-7, 94, 123-4, 126, 136-7, 148.
Clapping of the Hands, 31, 66.

Clarke, E. D. (Author of "Travels in various Countries"), 67.
Clavicembalum (Latin), Clavicembalo (Italian), 65, 330, 348, 351-2.
Clavichord, 65, 359, 361, 366, 368, 378.
Clavier type of Instruments (Creative consequences of), 365-8.
Clef, 178, 213, 218.
Clovis (King of the Franks), 148.
Cohen, Francis L., 44-56.
Collegiate Church, Brunswick (Organ of, towards end of 15th Century), 350.
Comma, 98, 228.
Common Chord, 245, 256-59.
Concerted Effect, 132, 137.
Concourse of Song, 86.
Consonance, 127.
Constantine, 159.
Constantinople Dervishes, 75.
Contorniates, 157-8.
Cornet (Assyrian), 40.
Corteccio, 293.
Council of Narbonne, 203.
Counter-melodic Effect, 334-5, 341.
Counterpoint, 213-4, 226, 342-3.
Crayfish, 3.
Crotola (Castanets), 26.
Crwth or Crowth, 167, 170.
Ctestibus (Father of Hero), 138, 157.
Cuneiform Tablets, 79.
Cymbals, 58, 64, 86.
"Dafne" (by Rinuccini), 309.
Daniel, Book of, 40.
David, 43, 45, 63, 78.
De Lange, Daniel, 211.
De Monte, P., 247, 263-4, 282, 358.
Delphi, 83, 111.
Denis, St., Abbey of, 170.
Dervishes (Constantinople), 78.
Des Prés, Josquin, 212, 249.
Descant, 210, 225, 232-8, 243, 344, 369, 382.
Diatonic Scale, 11, 28, 30, 91, 104, 131, 134, 156, 365.
Didymus, 97.
Dionysian Artists, 123, 136.
Dionysius, 110.
Dissonance, 377 (Definition of, by Euclid), 127.
Domi, 300.
Dorians, 82.
Dot, 184-5, 187-8, 213, 218.
Drums, 26.
Ducoudray, L. A. Bourgault, 149.
Dufay, William, 210, 240-1, 244-6, 248-9, 260-2, 282, 358-60.
Dulcimer, 40, 65-7.
Dunstan, St., 160.
Dutch Masterpieces, 210.
Ecclesiastical Modes, 153.
Edinburgh Review, 120.
Egypt, 11-13, 27-8, 82, 86, 91, 122, 138, 157.
Egyptian Combinations of Instruments, 32-3, 70.
Egyptian Harmonic Effect, 33, 37.
Egyptian Instruments.
Crotola, 26.
Drums, 26.
Flute, 22, 28, 30.
Harp, 17, 80.
Lute or Tamboura, 23, 68, 123-6.
Lyre, 19.
Pipe, 21.
Tamboureen, 25.
Egyptian Monuments, 79.
Egyptian Music (System), 14, 30, 40, 69, 72-4, 86.
Egyptian Notation, 36.
Elgar, 381.
"Elijah," Mendelssohn's, 273, 276.

Elphege, Bishop, 156, 160, 164, 347.
Engel, Carl, 65, 68, 70, 75, 102-3, 163.
Enharmonic Scale (Greek), 103.
Enwoven Scales, 127, 354, 364 (In connection with Intonation), 357, 361-4, 369-76.
Ephesus, 111.
Equal Temperament, 368.
Ethelred, 181.
Ethelwold, St., 160.
Ethiopia, 72.
Etruscans, 135.
Euclid (of Alexandria), 96, 126-7, 131, 133, 156, 164, 216.
Eumenides (Furies in the), 120.
Euphrates, 12.
Euripides, 122-3.
Ezra (His Arrival in Jerusalem from Babylon), 46.
Fa-La's, Italian, 297.
Fandango (Andalusian Dance Song), 326.
Faux Bourdon, 232-4, 243.
Festa, 248-251, 258, 262.
Finn, 29.
Flaccus Albinus-Alcuin, 152.
Flats and Sharps, 96, 156, 163-4, 215-6, 222 (See Chromatic Scale and Effect).
Flemish School, 210-213, 240-1, 244-9, 263, 282.
Flinders, Petrie, 28.
Flute, Assyrian, 40, 65.
Flute, Double, 66, 87, 135.
Flute, Egyptian, 22, 28, 30, 124.
Flute, Greek, 86-7, 126.
Flute Playing (Greek), 86-7, 122.
Flute, Roman, 135-7, 139.
Folk-Song, 51.
"Four Passions," The (by H. Shütz), 258-9, 286, 308-9, 313-19, 332.
Franchinus Gafurius, 195,
Frank's (Melchior), Collection of Songs, 297.
Franco, 198, 206, 227.
French Opera, 330.
French School, 330.
Frescobaldi, 327.
Frottole, 292.
Fugue, 210, 255, 331.
Galilei Vincentio, 180.
Galileo Vincenzo, 110.
Gascony, 165.
Gaul, 200.
"Gelasian Sacramentary," 203.
German Opera, 249.
German School, 314-5.
Gevaert (Author of "Les Origines du Chant Liturgique de l'église latine"), 204.
Gibbon, 61, 146.
Gittith, 53.
Gounod, 35, 277, 289.
Grado (Ancient City in Italy), 159.
Graetz, H. (Jewish Historian), 43, 45, 53, 78.
Greco-Latin Music, 148, 153.
Greece, 13, 81, 84, 86, 122-3, 135-6.
Greece (Modern), 95.
Greek Comedy, 123, 136.
Greek Drama, 119-20, 123, 136, 138, 295, 298, 380.
Greek Monuments, 125.
Greek Music, 85-6, 108, 110, 115-6, 118-9, 122, 124, 128, 134.
Greek System, 88, 91-2, 94, 103, 108, 110, 149-50.
Gregory, St. (The Great), 200-5.
Gregory II., 203.
Gregory IV., 200.
Grove's Dictionary, 238, 292, 318, 349.
Guidiccini, Laura, 295.
Guido Aretino (Guy D'Arezzo), 161, 164, 216.
Guitar, 123.

Gulillmus Monachus, 234.
HACKBRET (German Cymbal), 65.
Halberstadt Organ, The, 285, 347-50, 358-62, 369.
Handel, 249, 261-2, 269, 273-4, 279, 314-16, 319, 325, 332-3, 340.
Handel's Chorus, "And with His Stripes," 268-9.
Harmony, 132-3, 172-3, 225, 227, 234-6, 243-280, 305, 379-80, 382-3.
Harp, 58, 148, 167, 321, 325 (See Assyrian and Asiatic instruments).
Harp (the Great), 123-4, 126.
Harpsichord, 65.
Hassler, Hans Leo, 297.
Haydn, 249, 273, 277, 368.
Hear Jacob's God (Handel's Chorus), 307.
Hebrew Music, 145 (See Jewish Music).
Hebrew Poetry, 55.
Helios (Hymn to), 110.
Helmholtz, 7, 95-6, 100, 121, 268.
Helmore, Rev. T., 233.
Heman (II. Chronicles 5, v. 12), 57.
Hermes (Mercury, so-called by the Greeks), 72.
Hero, 138, 157, 351.
Heroic Metre, 115.
Hexachordal System, 156, 161-2.
Hieroglyphs, Egyptian, 125.
Hieron (Tyrant of Syracuse), 111.
Hipkins, A. J., 349, 352.
Hobrecht, 190.
Homophonal Effect, 117.
Hope, Robert Charles, 83, 92, 94, 100, 150-2, 164, 195, 197, 200, 203-5.
Hopkins, E. J., 156.
Hucbald, 104, 179, 216, 225, 236-7.
Human Voice, 38, 63, 117, 126, 137, 139.
Hurdy-gurdy, 167.
Hutchinson, Lord, 67.
Hypate, 101, 108.
"IL Giasone" (Cavalli), 304, 323.
Illyria, 136.
Imitation, 241-3, 309.
Intermediate Semitones (of Diatonic Scale), 347-54, 362-5.
"Intermezzo" (Performed in 1539), 292-3.
Intonation, 357, 360-64.
Inversion, Second, of Common Chord (Its Inordinate Æsthetic Power), 275-8.
Inversions of Chords, 256-7.
Isaiah, Book of, 42.
Isidore of Seville, 200, 204.
Israelitish Exodus, 80.
Italian Masques, 328.
Italian Melody, 291-304, 315, 319-20.
Italian Reciters, 121.
Italian School, 116, 263.
Italy, Secular Songs of, 291-2.
Italy, Spirit of, 249-50.
JEDUTHUN (II. Chronicles 5, v. 12), 57.
Jephtha (Carissimi's), 252, 306-7, 310-15, 319-20.
Jerome, St., 158-9.
Jerusalem (Bishops of), 145.
Jerusalem (Yearly Festivals at), 42.
Jewish Captivity (in Egypt), 11.
Jewish Music, 39-63, 78, 81, 145, 187, 208.
Jewish Musical Instruments, 13.
Jewish National Life (Apogee), 78, 80.
Job, 54.
John VIII. (Bishop of Rome), 159.
John the Deacon, 204.

Josiah, 53.
Josquin des Prés, 212.
Julian, the Emperor, 158.
Julianus, 159.
"Junta's Roman Collection of Songs," 292.
KAHUN (Old Town of Egypt), 28.
Key-board, 160, 350-4, 361-4, 366-7 (of Halberstadt Organ), 349-50.
Key-note, 10, 101, 108, 109, 133-4, 361.
Kircher, 110.
Kissar (Modern Nubian Lyre), 71.
Korah, Sons of (Psalmists), 43.
LACROIX, Paul, 175.
"L'Amphiparnasso," 294.
Lavoix, H. (fils), 40, 64, 78, 170, 174, 175.
Lesbos, 91.
Levites, 43-4, 53, 57.
Lewis (the Debonnaire), 200.
"L'Homme Armée," 240-1.
Lichanos, 99.
Ligatures, 196.
Livingstone, Dr., 6.
Lohengrin, 36, 117.
Lute, 23-5, 58, 68, 86, 123, 139, 321, 325, 330.
Lyre (Assyrian), 71.
Lyre (Egyptian), 11.
Lyre (Greek), 7, 17, 82, 85, 87-8, 92-4, 124, 137, 139, 321, 325.
MACFARREN, G. A., 103, 105.
Madrigal, 248, 255, 292-4, 301, 305, 331.
Magadi, 86.
Magdeburgh (Cathedral of), 160.
Major Mode, 102, 163.
Malagñena, 326 (Andalusian Dance Song).
Marchetto (of Padua), 227, 249.
Mazzocchi, Domenico, 302-3, 306.
Measure (Five-four), 112 (See Accent).
Measured Music, 183-195, 197-200.
Mediæval Modes (their Gradual Metamorphosis and Digest into the Major and Minor), 267-8.
Mediæval System of Music, 151-4.
Melchior, Frank's, Collection of Songs, 297.
Melewi Dervishes, 75, 187, 208.
"Mélodies Populaires de Grèce d'Orient," 149.
Melody, 78 (See Italian Melody).
Melopœia, 121.
Memling (Painting by—of Key-board, 1479), 349.
Mendelssohn, 314-18, 337, 380 (His Lobesang, 380).
Mercury, 82.
Mese, the Key-note of the Greek Modes, 98-101.
Mesodemes, 110.
Mesopotamia, 79.
Messenger of the Congregation, 47.
Meyerbeer, 338.
Milne, Rev. J. R. (Writer of an Article on H. Shütz), 319.
Milton (His Hymn on the Nativity), 114, 143.
Modern Music, 128, 144-5.
Modes, 50, 149-50, 152-3, 201.
Modulation, 78, 108, 124, 126-7, 134, 164-5, 171-2, 281-90, 367, 379.
Mole Cricket, 3.
Monteverde, 272, 277, 301, 304, 313.
Morley, 213.
Moulton, R. G., 55, 61.
Mouton, Jean, 265-6.
Mozart, 249, 327.

Musette (French—a Species of Small Bagpipe), 165.
Musical Declamation, 121.
Musical Instinct, 77.
Musurgia, 110.

NAPLES, 120.
Nebuchadnezzar, 40.
Neginoth (Hebrew Word Signifying *Strings*), 48.
Nemesis (Hymn to), 110.
Neumes, 48, 174-183, 217, 219.
Nile, 12.
Nineveh, 81.
Notation, 109, 172-195, 213-25.
Notes, 174-195, 217.
Nubia, 71.
Nubian Music (Present), 74.
"Nuovo Musiche," 300.

OBED-EDOM (House of—whence Ark was Brought—I. Chron. xv. 25), 41.
Obrecht (Old Flemish Composer), 154, 211.
Ockeghem, 366, 378 (Old Flemish Composer), 154, 211, 249.
Odington, W. (a Monk of Evesham), 182.
Opera, 325.
Opera Buffa, 329.
Opertz, Martin, 309.
Oratoriens, Church of (Rome), 295.
Oratorio, 305-20, 325.
Orazzio Vecchio (an Italian Composer *circa* 1594), 294.
Organ, 138, 150-52, 156-60, 164, 285, 322, 347-52, 355, 358-64.
Organistrum (Viol with Wheel and Handle), 167.
Organum, 225-236, 239, 242.
Orpheus and Euridice (Monteverde), 301-2.
Orpheus and Euridice (Rinuccini, Peri and Caccini), 294, 298-9.
Overlaid, Overlapping or Enwoven, Scales, 95-6, 127, 130, 134, 163, 221, 269-70, 280, 284.
Overlooker (in the Synagogue), 47.

PAINTING, 132.
Palestrina, 154, 250-1, 253-5, 258, 264, 267, 281-2, 287, 289.
Pantomime, 138.
Parhypate (Note next above Dominant of Greek Scale), 101.
Part-Song, 331.
Payne, E. J., 360.
Pedals, 160.
Peri, Jacopo, 294-5, 298-9, 308, 313, 323, 328.
Perowne, J. J. S., 40, 59, 63.
Persia, 65.
Persian Small Drum, 64.
Persian Wars, 124.
Petrucci (Italian Publisher), 292.
Philistines (Land of the), 80.
Phocians, 111 (Inhabitants of a Province of Ancient Greece).
Phœnicia, 82-3.
Piano, 65.
Pindar, 110.
Pipe, 21.
Pipe, Double, 21, 66.
Pippin (Father of Charles the Great), 159.
Pitch Signatures, 178.
Plain Harmony, 234, 243.
Plain Song (or Chant), 50, 149, 151, 181, 196, 201, 207, 210, 213, 226, 242, 361.
Plectrum, 65, 71.
Pliny (the Younger), 146.
"Plorate Filii Israel" (Carissimi), 306-8.
Polyphony, 172, 225, 234, 238, 255, 331, 358, 360, 381.
Portative Organ, 359 (See Regal).
Practica Musicæ, 195.
Precentor (the Ancient Jewish), 47, 53.
Pretorius, 347-8.
Prometheus, 120.

Proverbs (Book of), 54.
Psalms (Book of), 40, 42, 54, 57, 60-2.
Psaltery, 40, 58, 65.
Psychic Factor (The), in Intonation and Musical Effect Generally), 376-8.
Ptolemy, 94-5, 97, 149, 151, 355.
Pythagoras, 27, 91, 95, 355.
Pythagorian Intonation, 227-8.
Pythian Games, 110.

QUARTET (Instrumental), 331, 367.
Queen's Hall, 112.
"Querimonia di S. Maria Maddelena," 303.
Qytârah Barbaryeh (Modern Egyptian Name for the Nubian Kissar), 71.

RAMESES III, 16.
"Rappresentazione del anima e corpo," 295, 298-9.
Rawlinson, Rev. George, 69.
Reader in the Temple, 47.
Reading of the Law, 44.
Rebec, 165, 169.
Recitative, 106, 296-8, 301-3, 306.
Redemption (Gounod's Oratorio), 277-8.
Regal (Portative Organ), 351-3.
Religion (the Special Connection between it and Music), 385.
Rests, 193-5.
Reynold's Collection of Songs, 297.
Rhythm, 113, 149, 189, 218 (See Accent).
Rinuccini, Ottavia (Italian Librettist), 294, 308.
Rockstro, W. S., 197, 200, 202, 205, 207, 238-9, 313, 319.
Roman Empire, 112, 139.
Roman Liturgy, 95.
Roman Music, 135.
Roman Priests, 121.
Rome, 110, 135-6, 138, 144, 200, 233, 295, 302.
Rondena (Andalusian Dance Song), 326.
Rossi, M. A., 327, 331-2, 334.
Ruckers (Flemish Harpsichord Makers, Established Antwerp 1555), 352.

SABBATH, 46.
Sackbut, 40.
Sacramentary (Gelasian), 203.
Sacramentary (Gregorian), 205.
Samuel (Ancestor of the Sons of Korah), 43, 45, 78.
Sanctuary, 47.
Santir (a Persian Dulcimer), 65.
Sappho, 91, 95.
Saviour, St. (Monastery of), 111.
Scale, Diatonic, 11, 28, 30, 91.
Scale of Nature, 103.
Scale, The Typical (Relations of Notes in), 355-7, 360.
Scale-Forms, 50, 74 (See Egyptian and Greek Systems).
Scales, Arrangement of, in our System, 356-7.
Scales, Systems of, 128-9, 131, 164, 172 (See Scale Forms).
Scarlatti, Alesandro, 324-5, 331-2.
Scarlatti, Domenico, 325.
Schubert, F. P., 380.
Scott, Sir Walter, 114.
Scotus Erigena, 225.
Sculpture, 132.
Selah (Hebrew—Probably a Musical Direction), 42.
Semitic Alphabet, 174.
Seneca, 137.
Shakespeare (His Lyrics), 114.
Sharps, 103, 130, 164, 215-16.
Sheminith (Inscription to Psalms), 41.

Shophar (a Jewish Sacred Trumpet), 57.
Shir, Mizmor (Inscription to Psalms), 41.
Shütz, Heinrich, 258-9, 282-3, 286, 308, 313, 316-18, 332.
Signatures (Pitch), 178.
Sistrum, 26, 86.
Smith, Father (Built Organ for Temple Church 1682-3), 363.
Solomon, 57, 80.
Song of Degrees, 41.
Song, the Artistic, 291-304.
Sophocles, 122-3.
Southgate, T. L., 28-9.
Spohr, 314.
Stabat Mater (Rossini), 337.
Stadler, Abbé, 75.
Staff, 177-183, 213, 218-19.
Stainer, Sir John, 359.
Stanley, H. M., 6, 18.
Stewart Perowne, J. J., 40.
St. John (Hospital of—Bruges), 349.
Subdominant, Chord of (Its Inherent Æsthetic Power), 275, 278-9.
Suez (Isthmus of), 12.
Suites, 330.
"Sumer is icumen in," 181-2, 189, 199, 241.
Supertonic Progression to Dominant, 278.
Supertonic with Seventh (Its Powerful Æsthetic Effect), 276.
"Sursum Corda" Mass, 207-8.
Sweelinck (Flemish Composer), 154.
Swinburne, 114.
Synagogue, 44-46, 50.
Syracuse, 111.
Syria, 79.
Ta'amin (Hebrew Expression for Ornaments, Tropes, etc.), 48.
Tamboura, 68, 123-6.
Tel-el-Amarna (Ancient City of Upper Egypt where Cuneiform Tablets have been Recently Discovered), 79-80.
Temple of Jerusalem, 45-47, 57, 147.
Tennyson, 114.
Terpander, 83, 91, 94.
Tetrachords, 164.
Thebes, 24, 79, 126.
Thematic Treatment, 339-46, 367.
Theodoric (King of the Ostrogoths), 148.
"There is a Green Hill" (Gounod), 289.
Thoth (Egyptian God of Eloquence), 72.
Thrace, 82.
Through or Thorough, Bass, 322-3.
Tie, 213, 218-9.
Tigris, 12.
Timbre, 117.
Timbrel, 64.
Time, 113, 183-195, 197-200, 218.
Time Siguatures, 190, 193, 213, 219.
Time Values, 183-195, 198-9, 206.
Tonality, 253-6, 280.
Tonic, 100 (See Key-note).
Trajan, 147.
Tralles (Near Ephesus), 111.
Triangle, 86.
Trigon, 83.
Triplum, 226.
Troubadors, 170-1, 322.
Trouvères, 170-1, 322.
Trumpet, 57-8, 86-7, 136.
Tyre, 83.
Usertesen, 11, 28.
Vecchio, Orazzio (Italian Composer), 294.
Venatius Fortunatus, 167.
Venetian School, 249.
Viadama, 323.

Villanella (a Popular kind of Part-Song in Italy about 1500), 292, 294, 297.
Viol, 156, 166, 169-71, 330, 360-1.
Violin, 167.
Vitruvius, 137, 351.
Vocal Effect, 63, 117, 126, 137, 139—(Development of at Early Flemish Period in Relation to Organ), 355.
Volkslied, 248.
WAGNER, 36, 380-1.
Wagnerian Accompaniment, 219.
Wagnerian Drama, 122.
Warnefried, Paul (Ancient Writer under Charlemagne), 204.
Weber, C. M., 290, 380.
Werckmeister (Wrote on Musical Temperament about 1645), 368.
Wilkinson, Sir Gardiner, 125.
Willart, Adriano, 249.
Winchester Cathedral, 156, 160, 164, 181.
Wing, W. H., 112.
Wodehouse, Mrs. Edmund, 292, 297, 326.
Wordsworth, 114.
Wulstan (A Monk, died 963), 156.
ZARLINO, 355.

ERRATA.

Page 11, line 12, for Usertsen read *Usertesen.*
Page 105, line 7, for key-noe read *key-note.*
Page 277, line 7, after "adore" add "*where the words come in the second time.*"
Page 307, add *ties* between semibreves in the two bars before last, of example.

THE END.

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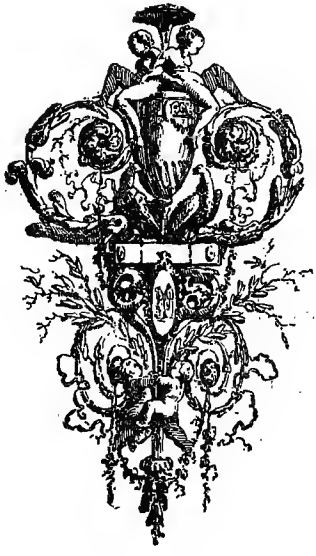

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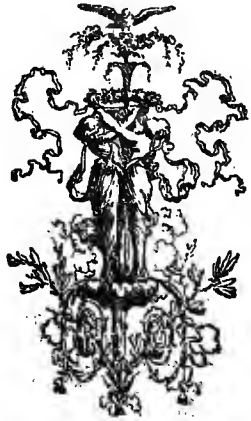

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